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Vol. X **CONTENTS** No. 7

	Page
HUNTING ELEPHANTS WITH A CAMERA, *by Jack Smith, A. S. C.*	3
THOSE FUNNY BOYS, *by Loretta K. Dean*	4
DAVID WARK GRIFFITH, *by Paul Thompson*	6
INDEPENDENTS BURST INTO SOUND, *by Pat Dowling*	7
SCORING, SYNCHRONIZING AND RE-RECORDING SOUND PICTURES, *by K. F. Morgan*	8
AS THE EDITOR SEES IT	10
AN EXPEDITION TO NGATANGUAL, *by Len H. Roos, A. S. C.*	16
LIGHT'S GOLDEN JUBILEE *(pictures)*	24
AMATEUR MOVIE MAKING, *by William Stull A. S. C.*	27
REFLECTORS—HOW MADE AND USED, *by Syril Dusenbery*	31
PROFESSIONAL AMATEURS, *by William Stull, A. S. C.*	34
YOUR MAKEUP PROBLEMS, *by Max Factor*	37

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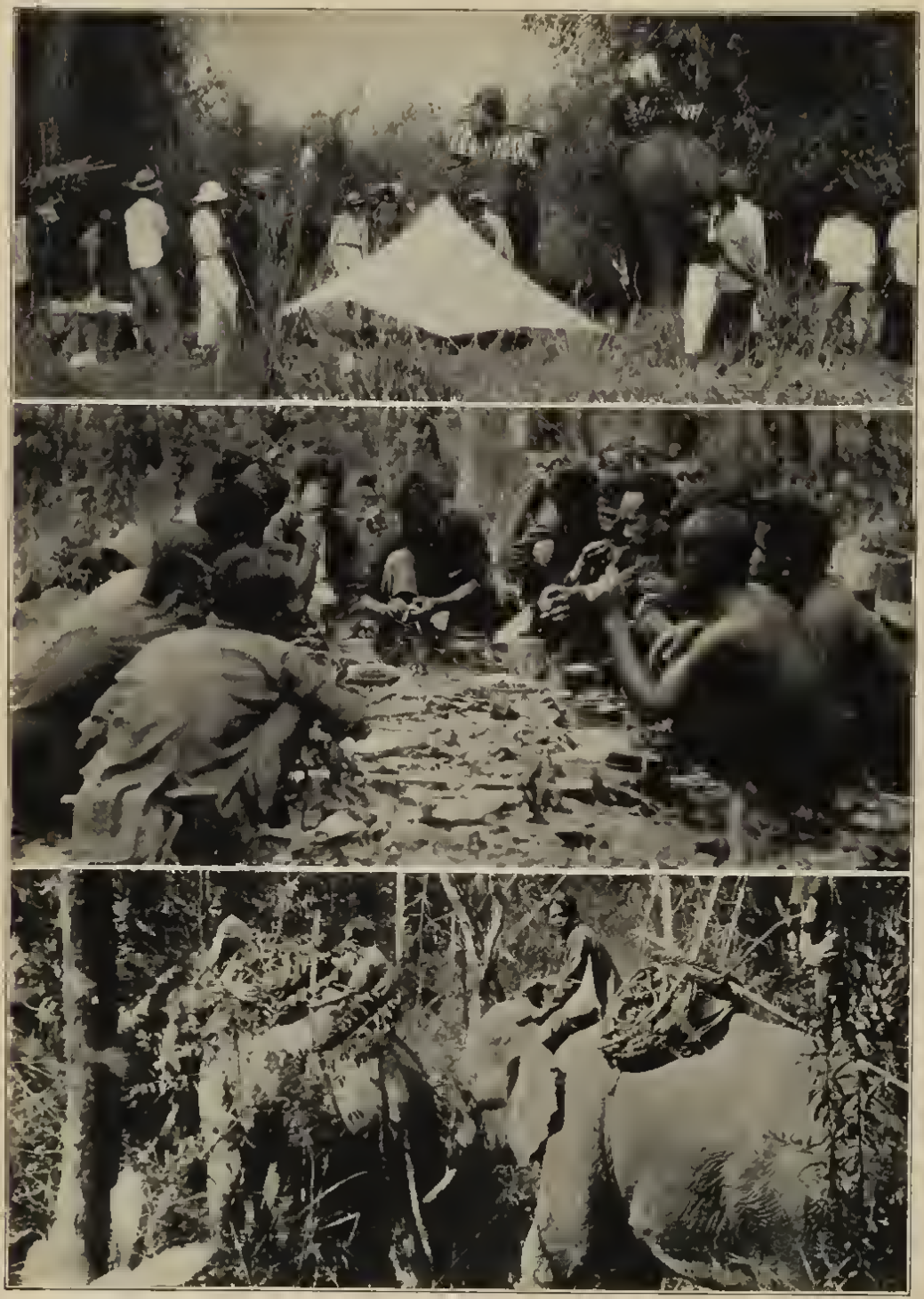


Hunting wild elephant [illegible] the job as sh[illegible] in above photos by Jack [illegible]

HUNTING ELEPHANTS WITH A CAMERA

Exciting Times In the Siamese Jungles When An A. S. C. Member Went Hunting

By JACK SMITH, *A. S. C.*

Mr Smith has recently returned from a long stay in Siam where he made a motion picture which is now being cut in Hollywood Reports filtering out from the cutting room indicate that Mr Smith has brought back a picture that will be magnificent We asked him to write us a story which follows—EDITOR S NOTE

OF ALL the countries in the world, I can truthfully say that in none have I ever been treated so Royally as in Siam. Everyone there from the King down to the lowest subject seemed bent upon assisting me in my work of making a motion picture in their marvelous country Without their wonderful cooperation it would have been impossible With it I secured a picture that I hope will justify the assistance of those kind people of Siam

When it became known by the King and his aids that I needed an elephant hunt for a part of my picture the orders passed swiftly about and in a comparatively brief time the arrangements were made and I had an expedition started that was fit for a king.

To describe the whole affair would be difficult So from here on I shall just run my daily diary which will take the hunt in sequence from start to finish and will be infinitely more interesting than an attempt at a story

FEBRUARY 8TH

We loaded our camera equipment and provisions of food and cooking utensils together with what few clothes and blanket rolls we had taken along into two trucks aand left Lampang at 9 a m. for Chieng-Rai, a town 235 kilometres north of Lampang Nothing eventful on the trip only very enjoyable for the roads were all very good, beautiful surrounding country and drives winding in and out among the hills trailing through thick jungle growth on both sides of the road When we arrived at Chieng-Rai arrangements had been made to put us up at a house in the Governor s compound The entire house was built of bamboo—floor and all, giving plenty of room for air and more than you wanted at night for it turns plenty cold up here in the northern section at night.

FEBRUARY 9TH

Went over to meet the King's elephant men and the elephant hunters Talked to them about the hunt for some time, getting all the dope I could as to how they started in on this thing in order to get my own work lined up Arranged to have some camera stands built into two of the howdahs to use for photographing on the elephant's backs Then called on Prince and Princess Svasti before lunch Incidentally, this was Chinese New Years and we had a hard time trying to get the carpenters to work that afternoon but finally we got one to bring three of his friends for thirty ticals (about $14 00) for the afternoon's work The elephants were all stationed down at the river on account of green foliage on trees and the water so here comes the chief carpenter and his three friends carrying their long carpenter's work bench (which was the first man we had seen since coming over that worked with a bench!) and their tools all the way from town down to the river bank Cartage free of charge!

Spent the afternoon shooting some film of the Prince and his family riding the elephants and were invited to take a ride around town, then south to another town about fifty kilos distant Of course being Chinese New Years there were plenty of fire crackers and fire works going on so stopped over there and had a real Chinese dinner, shot a few fire crackers ourselves and were home about 10 p. m.

FEBRUARY 10TH

Had arranged with the Khum-Phra, the King's titled mahout, to visit the village where the men were preparing for the elephant hunt making their ropes, etc The rope making is rather crude but novel It is made of water buffalo hide that is green taking the green hide with hair in it and stretch it on the ground staking the edges down with bamboo pegs Then they have one man to do the cutting He starts in the center with a huge knife and cuts a small hole, then begins cutting in a circle until the entire hide is cut into a ribbon about one and one-half inches wide and about one hundred yards long This is then put through a fork of a tree at either end and a stick tied to each end with a man at each stick who begin to twist in opposite directions until the ribbon of hide is twisted very tight This is left to dry or cure from three to four days, when they take three of these twisted ropes and twist them together making one large rope of bnffalo hide This is what they use for the catching of a wild elephant and is strong enough to hold a large battleship in a storm After this one large rope is finished it has to be turned over to the Kruba-Jun or priest of the hunt He is the head elephant hunter who puts all the others through the ceremony before the hunt After he blesses the rope it is considered very sacred and no one other than the hunters themselves can touch it under any conditions. For instance, if I should have touched the rope or stepped over it, they would have stopped the hunt but fortunately, I was prepared for these things before hand so knew better than even get too close to it This ceremony I filmed all the way through.

A wild one caught and tied

FEBRUARY 11TH

Around 8 a m.

continued on page 22

THOSE FUNNY BOYS

A Few Inside Facts About the Screen's Funniest Pair of Comedians and the Man Who Has Photographed Most of Their Pictures

By LORETTA K. DEAN

ON a bright and sunny morning nineteen years ago a rather scurvy-looking cattle boat pulled into its berth at New York City Gathered on its deck was a motley group of men and women who craned their various necks as they gazed goggle-eyed at the greatest city in America Down below there was much bawling of cattle who objected to being jostled about in cramped quarters, and the combination of odors that drifted up from the cook's galley and the cattle section gave many of the passengers a peculiar impression of America

One group of individuals who hastened to get ashore contain two funny little fellows who were to eventually make millions of Americans laugh until tears ran down their faces One of these men was Charles Chaplin, the other was Stan Laurel one of the screen's greatest comedians and fun-partner of Oliver Hardy But on that particular morning no one who watched the passengers land gave a second glance at either of the men

So, that was the way Stan Laurel arrived in America He was a member of the little vaudeville troup of Englishmen who were struggling to make ends meet

The other half of the famous Laurel and Hardy combination Oliver Hardy made his bow to America in Atlanta Georgia But he came via the Stork Route being born in Atlanta in 1892 His arrival was of more moment than that of Laurel, for Hardy's father was a politician and of course he had to hand out cigars to his friends as he told them of the bouncing baby boy

And while we are at the beginning of things we might as well tell you that along about the same time as Hardy's Dad was distributing cigars in Georgia another proud Papa was handing out cheroots up in Portland Oregon This distribution was caused by the arrival of a howling infant who was christened Len Powers and who was destined to become a cameraman in Hollywood and photograph the majority of the pictures in which Laurel and Hardy were co starred

So that's that as far as the introductions are concerned

Laurel's eduration was what might be termed 'spasmodic" His father and mother were professionals, and Laurel was hopping about England so fast he had little time for school So he turned to the stage and after much ups and downs, mostly downs, landed on the cattleboat to try luck in America

Hardy went to college as the sons of all Southern gentlemen must He studied law But his mind was theatrical, and against his family's wishes he took his six feet and one inch of height and 285 pounds of weight into theatrical realms and gained a living in vaudeville minstrel troupes and musical comedy and stock

Powers sort of went against his family's wishes, too, when he decided that there was a future in the boxing game So he donned the eight ounce gloves and made quite a name for himself by specializing on knocking out ambitious fighters who were unfortunate enough to meet him in the squared circle sometime called the ring'

And then all three found their way into pictures in Hollywood Laurel and Hardy then unknown to each other came as actors and Powers turned to the cinematographic side At Universal Laurel made his picture bow That was in 1917 Meanwhile Hardy had made his first screen appearance in 1913 Both liked it and both decided to stick And in 1914 Powers started with Reliance as a cameraman He liked it too and decided to stick Since then he has photographed 400 and some pictures

It was not until 1926 that the combination came together Laurel had been playing comedy roles all about Hollywood, and Hardy had played everything from comedy to villain parts

Watch the Birdie" says Len Powers A. S. C. as he starts to shoot this comedy pair

But they both landed at the Hal Roach lot and one day Hardy spilled a pan of hot grease on his arm

Laurel came along just then Hardy looked at Laurel Laurel looked at Hardy Laurel cried Hardy laughed And each suddenly discovered the other was a perfect foil

Then came the first picture together It was a riot of laughter and the world knew that Hal Roach had discovered a pair of honest to-goodness funny men, a real rarity in the picture field And Len Powers was the man who was photographing them

Theirs was a new comedy technique Laurel completely changed his style of comedy overnight and he and Hardy worked like a well-oiled machine together—perfect fits—and their pictures were perfectly photographed

'Habeas Corpus Big Business 'Men O'War ' Perfect Day " You re Darn Tootin' ' Soup to Nuts Birthmarks ' "Unaccustomed As We Are ' were a few of the pictures this trio turned out to the accompaniment of gales of laughter from millions of movie-goers

' This man Powers is the funniest cameraman I ever worked with ' says Hardy

You can t help being funny when you look at him " adds Laurel

And who can help laughing when they have to work with a pair of nuts like you fellows chimes in Powers

So that makes us a mutual admiration society, ' chorus the trio amid uproarious mirth and back-slapping

And then they all looked serious for a moment My Gosh,' exclaimed Hardy What would we do without out director?"

Jimmy Parrot is the cat s meow when it comes to directing comedy declared Laurel

All right, ' shouted Parrot, suppose you fellows do a little work '

He s not so good after all, ' declared Hardy

So Laurel started to cry and Hardy faw down ' and another riot was on

From Powers we learned the secret of this pair s success Summed up it is simply this the pair just act natural

Sometimes, explained Powers I can t do a thing for laughing as they start to *ad lib* Their funniest gags are pulled at these moments and no one could ever be funnier than they are when they once get started I remember in Birthmarks most of the very funniest stuff was absolutely devised on the spur of the moment by Stan and Oliver They got started and we couldn t stop them And that sequence was side splitting

One reason why I say they are the funniest men in pictures

(*Continued on Page* 39)

Laurel and Hardy [illegible]

DAVID WARK GRIFFITH

A FEW INTERESTING SIDE LIGHTS ON THE MOVIE'S BELASCO

By PAUL THOMPSON

AS LONG as motion pictures continue to exist—which will be until the end of time, judging by their constantly increasing popularity, the name of David Wark Griffith will live One of the most notable of that courageous band of pioneers in the early days of the industry he is today still one of the outstanding figues in the industry, art or what you will

"What is Griffith doing or what is the old master planning?" This is the inevitable question asked wherever anyone associated with the films or fans foregather Particularly after any unwonted silence on his part At present as everyone even slightly conversant with movie subjects knows, he is in the throes of preparing for the screen his conception of the life of the great emancipator, Abraham Lincoln There can be brought against him no charge of plagiarism because he confesses he has never seen the picture which Al and Ray Rockett brought to the screen or John Drinkwater's striking stage presentment of the same martyr No, the Belasco of the movies as he has been so properly named, will give a version unlike any ever presented on stage or screen It will be as all his offerings have been characteristically and distinctly a David Wark Griffith Abraham Lincoln.

Griffith's invasion of the then new and despised form of drama came through his dissatisfaction with his own rendition of "Hamlet" Like the melancholy and lean Dane whose role he essayed so unsuccessfully, though in many physical ways he suggests Shakespeare's character, he, too, condemns too too solid flesh" To Griffith it is most immortal Through hereditary influences he has no fear for himself There is no need of any eighteen day diet because today he possesses the slenderness that must have been his on the spoken stage and in the early days of the cinema Time has indeed treated him kindly.

From acting on the so-called legitimate stage Griffith began writing scenarios of one reel and shorter lengths For these he was paid the large sum of five dollars each He didn t care how bad they were if only they went over and were sold That was the time when one could, if he had foresight have purchased stock in the Biograph company which bought and produced the Griffith one-reelers at fifty cents a share In two years that same stock had risen to $125 a share In 1913 when the government sued for the dissolution of the patents group an investment would have netted the incredible profit of something like seventeen hundred per cent.

Arthur Marden was the first Griffith cameraman This was in 1909 He was with him for two or three years The next man was Billy Bitzer whose name will always be associated with David Wark s because he shot the majority of the pictures which brought fame if not always money to the pioneer The latter was with Griffith on and off for twelve years and even as late as 1929 shot part of the last important picture which Griffith did Jack Lloyd's "The Drums of Love" It is my impression that at one of the early stages of their two careers it was Griffith who worked for Billy for the handsome salary of five dollars a day If that were true their positions soon were reversed and the employee became the boss Had Griffith taken his cameraman's advice he today would unquestionably be worth lots of the money which he has made for others He was only getting from fifty to sixty dollars a week salary and only because of this diffidence in going in and demanding three times that amount—which Billy insisted they would gladly have paid him—continued working for the smaller sum

At one time all that Griffith needed to buy an interest in a picture which afterwards made a fortune for practically everyone who had any interest in the same was $150 in cash He had a cousin who had money but he would lend this to him only on the condition that he did not put it into the "crazy motion picture game." He didn't get the money and Griffith did not get the chance to make a gilt-edge investment That, however, is only one of thousands of similar tales which would rival the history of Anne Nichols' "Abie's Irish Rose" Even in those early days Mardon and Bitzer and others who worked for the master-mind thought him crazy "I figure they still think the same thing today and I do not blame them in a way" says Griffith

And yet, he tried to and in some instances did persuade his cameramen to experiment with things that today are heralded as revolutionary For example almost twenty years ago Griffith got them to take close-ups, an unheard-of and thoroughly impractical idea, everybody agreed They tried the idea out—successfully—first with Marden with 6-2 lenses then later with even more pronounced success with Billy Bitzer shooting with 5-9 lenses

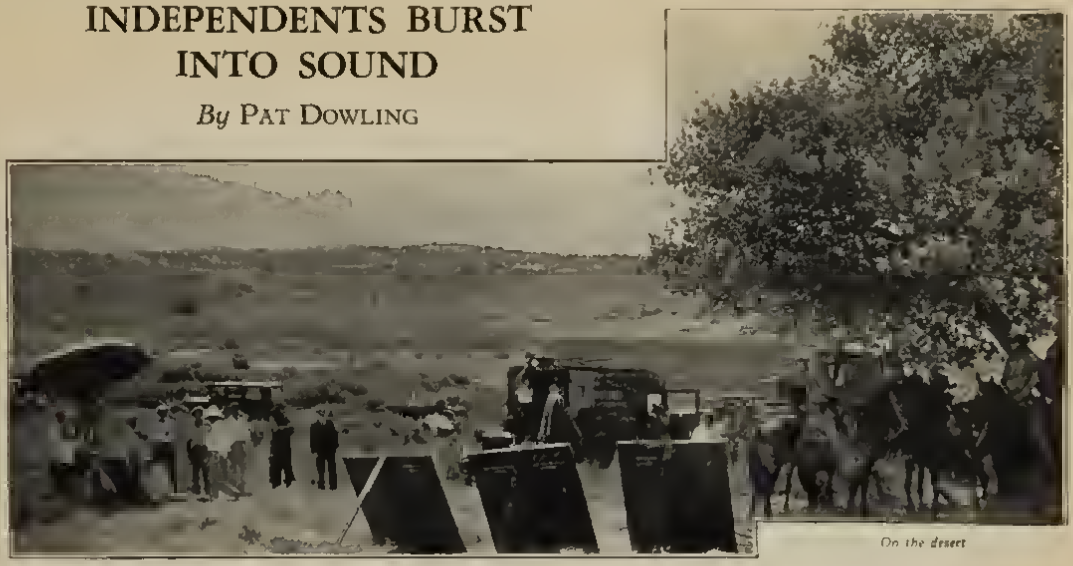
So with the fade out and fade-in That was another revolutionary thing discovered and perfected with a cigar box. This was first used—to be copied immediately by all rivals—in "The Last of the Mohicans" with Owen Moore and Mary Pickford in the picture version of James Fenimore Cooper s famous Indian story A blacksmith pressed into service constructed a cigar box so that the picture would gradually fade off or on with just as much perfection as it is done today The idea was really the thought of Jimmy Smith today a cutter in the business For one year he was Griffith s boss Just another of the topsy-turvy upsets that characterize the motion picture game

The close-up innovation came from a desire for parallel action The Germans claim it is the most important discovery in the history of pictures Up to that time pictures were continued action as in a stage play of today, all action being taken at approximately the same distance from the camera with a monotonous repetition of the same sized figures

(*Continued on Page* 38)

INDEPENDENTS BURST INTO SOUND

By PAT DOWLING



On the desert

WHEN sound pictures first came in a little over a year ago it was generally feared that this innovation would sound the death-knell of independent production The expense of building sound stages and securing talkie equipment and crews was so staggering that only the largest companies seemed able to stand it, while the independent producer always a tremendously worth-while factor in picture-making seemed likely to be quite barred from the race But that this fear is unfounded has been proven during the past six months at the Metropolitan Sound Studios where many leading independent producers have made quality talking pictures recorded by the same system used by the majority of the big line companies

Metropolitan is the only studio in the West licensed to service various individual producing companies with the Western Electric sound devices Early in the rush for sound studios and sound equipment, the Christie brothers who have been the owners of Metropolitan for some years, realized the necessity for a large leasing establishment where other producers besides their own individual company could be taken care of. And so they went in for two large sound stages, with recording channels, etc., adding three quarters of a million dollars to the permanent improvements of the lot ' This is being increased at present by another $200,000 in additional stages channels and equipment

One of the first outstanding examples of how an independent can come along and take advantage of these factors to get into the talking picture field rapidly is the experience of Sono-Art, Inc., one of the producers working at Metropolitan. Messrs. Weeks and Goebel organized their company signed Eddie Dowling to star, prepared their story and struck the market with a success in their first talking picture Comments everywhere were flattering to the recording part of the job which had been done, and confirmed the judgment of the unit producer when he signed up for recording with Western Electric System

Metropolitan has made quite a record since sound pictures started in production there last November Seven different producing companies have produced 12 all-talking feature pictures, and five producing companies have filmed a total of 38 short features It would have been impossible for all of these producers individually to build their own sound studios and get into production so quickly It is said that in the next six months the number of features and short pictures made there will be double this amount as other producers are getting into action at Metropolitan weekly

(*Continued on Page* 40)

Get me all the extras as the Mardi Gras swing by

SCORING, SYNCHRONIZING AND RE-RECORDING SOUND PICTURES

A Paper Presented at the S. M. P. E. Spring Meeting, New York City, May 6-9, 1929

By K. F. MORGAN
Electrical Research Products, Hollywood, California

MOTION picture engineers will understand better perhaps than electrical engineers the necessity for what has been termed dubbing' The entire realm of trick photography and duping as a necessary adjunct to editing of the silent motion picture now has its counterpart in sound production in this process Dubbing may be subdivided and classified as follows

(1) 'Scoring" or adding music to a picture that may or may not already have dialogue or sound.

(2) Synchronizing' or adding new sound effects or dialogue in synchronism with a picture which has previously been photographed with or without sound

(3) Re recording' or transferring a film or disc record to a new film or disc record by the electrical process originally used

Thus the art of dubbing may be simply making a sound record with the microphone to match a picture it may be the combining of new sound picked up by the microphone with one or more sound records already made it may be the combining of sound records only or it may be simply re-recording one sound record The last mentioned has three principal purposes First to make a new master record, second to transfer a record from film to disc or vice versa and third to correct volume variations and other defects

Probably ninety per cent of all the world's present day machinery and electrical apparatus for adding sound to the silent drama has been installed and placed in operation in less than a year While this tremendous demand for the manufacture and installation of equipment together with certain contemporary modifications and developments found necessary in the field was being met it was natural that no great amount of thought was given to what might be considered a secondary adjunct namely re-recording or combining sounds for the final editing of a picture consequently, this demand almost as urgent as the first, presented itself when the first few productions were ready for editing and while the recording installation work was at its height

Plans were under consideration it is true providing facilities for these processes at an early date but it is doubtful whether or not anyone anticipated the variety of problems that would present themselves in adapting sound production to all the 'tricks of the motion picture art

The first synchronized talking pictures were short Vitaphone subjects and Movietone news reels In either case the cutting and editing was fairly simple each take being one scene complete in itself About the same time, due to the demand for sound' pictures there were those with electrical sound effects manually operated at each performance not being mechanically synchronized with the picture Then came the practice of making records of sound effects or dialogue to match the silent sequences Schematic drawings indicating the general methods used in recording scoring and synchronizing are shown on Figure 1, A, B and C A close similarity between these processes will be noted from an inspection of the figures In synchronizing and scoring a projector and screen replace the camera and stage

The introduction of synchronized sound and dialogue into pictures of feature length presented the problem of sound cutting When the sound was recorded on film the problem was fairly simple since the sound track could be cut in the same manner as the picture With the original recording on disc the cutting became a rather involved mechanical as well as electrical process since the scenes as recorded had no definite chronological relation to the final product This introduced the first necessity for re-recording sound The re-recording method required the use of a number of disc reproducing machines so connected as to operate in synchronism with a recorder The sequence and duration of the various takes on several original records having been determined, a cue sheet was prepared

The application of the cue sheet involved a revolution count which insured the cutting in and out portions of these sound records in the sequence of the cut picture This process required an operator at each turntable as well as personnel for counting revolutions and cueing Subsequently the counting was simplified by the use of a record which actually reproduced the revolution count Finally a machine was developed which rendered the process automatic

Early sound pictures due to recording and production problems, were part talking with the silent scenes scored, and sound effects added The latter was accomplished by projecting the picture upon a screen on the recording stage where the desired sounds could be produced If the projection and recording machines were interlocked by a synchronous motor system the resultant sound record would be in synchronism with the picture A schematic drawing indicating such a set-up is shown on Figure 1 C Synchronizing and scoring are now extensively employed The results are often more satisfactory when the original take involves dialogue only than when all the incidental sound effects are recorded at that time This is true for two reasons First many exterior shots must be built up on the sound stage and

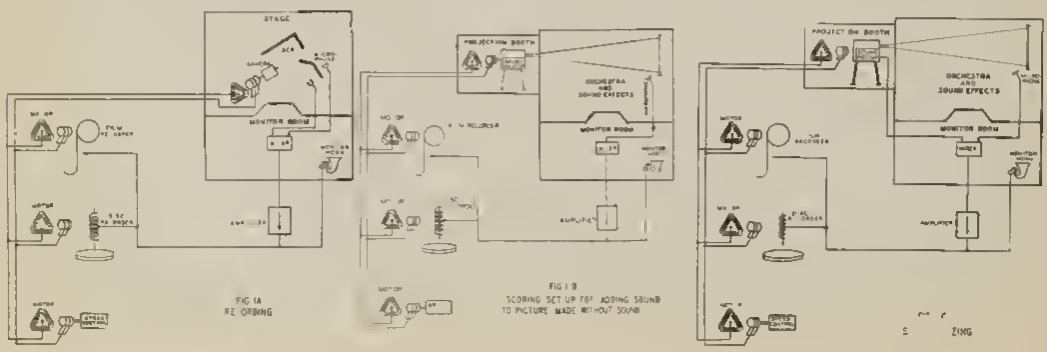


FIG 1A RE-ORDING

FIG 1 B SCORING SET UP FOR ADDING SOUND TO PICTURE MADE WITHOUT SOUND

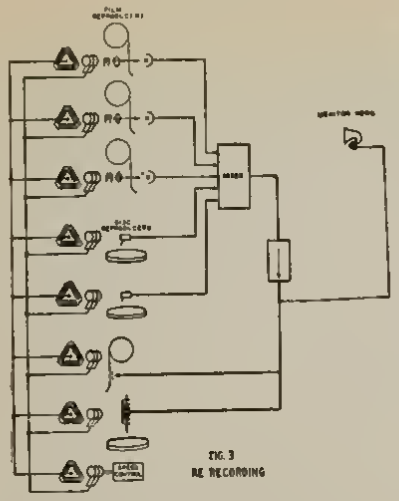


FIG. 3
RE RECORDING

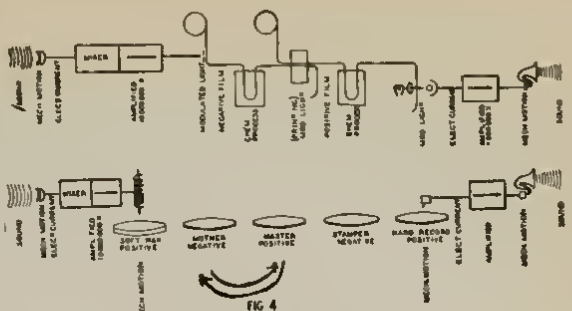


FIG 4
RECORDING AND SCORING

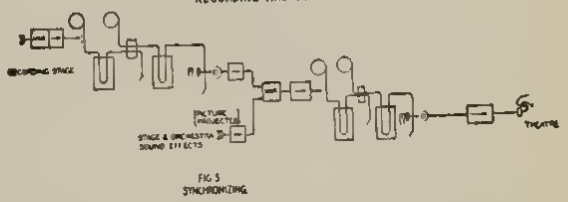


FIG 5
SYNCHRONIZING

it is not possible to accurately stimulate the actual condition of accompanying noise This applies particularly to street scenes and scenes involving water or rain effects Second revolver shots, explosions, or other violent noises will often sound unnatural or have too severe an action on the recording medium to be included in the original take In these cases the scene is taken minus the sound effects and these effects are synchronized after the picture is completed

There were early ideas of accumulating "libraries" of recorded sound effects which could be introduced into a picture where needed In order to add sounds (original or recorded) to those of a picture already produced, it is required that the original be re-recorded A schematic drawing of a re-recording system is shown on Figure 3 This was the function demanded in the studios just as it seemed that the production of 'all talking' pictures was safely under way. Several important pictures had been scheduled for release, and were nearing completion when it was found necessary to perform all of the above mentioned processes before release could be made

As stated above, the need for dubbing was anticipated In fact it was considered as a simple application of already developed processes This in a measure was correct, but even the combining of known processes presented detailed problems, which required a certain amount of engineering When the sound currents are obtained from a disc or film record rather than from a microphone direct the pickup must be made to reproduce the original sound currents with the utmost fidelity. Extraneous noises must not be introduced in this process of re-recording These problems, together with a somewhat different circuit layout, constitute a part of dubbing which will be considered later in more detail

Fig. 4 shows the various steps of recording and re-recording sound These drawings indicate the rather unusual transformation which takes place during the interval from the picking up of the original sounds to their restoration in the theatre Referring to the simplest of the processes namely, recording and scoring on film, it is of considerable interest to trace these changes. Beginning as sound waves, mechanical motion is imparted to the diaphragm of the condenser transmitter This mechanical motion is in turn translated into a minute electric current After being amplified the power of this current modulates a light to which film is exposed The resultant latent image is treated chemically and when developed again modulates a light to produce the positive After development this positive, when run thru a projector modulates a beam of light, thereby controlling a minute electric current After amplification the resultant power is sufficient to impart mechanical motion to a loud speaker diaphragm, thereby producing a very close approximation to the original sound Beginning as sound, fourteen changes of condition must be passed thru before the sound is re-formed The same number of changes occur in recording on disc

The changes in condition in the recording process are as follows

Film		*Disc*	
0	Sound	0	Sound
1	Mech Motion	1	Mech Motion
2	Small Current	2	Small Current
3	Large Current	3	Large Current
4	Mod Light	4	Mech Motion
5	Latent Image	5	Soft Wax
6	Metallic Image	6	Master
7	Mod Light	7	Mother
8	Latent Image	8	Stamper
9	Metallic Image	9	Hard Wax
10	Mod Light	10	Mech Motion
11	Small Current	11	Small Current
12	Large Current	12	Large Current
13	Mech Motion	13	Mech Motion
14	Sound	14	Sound

When sound is re-recorded there is no intermediate sound step the energy representing the sound being dealt with in the electrical

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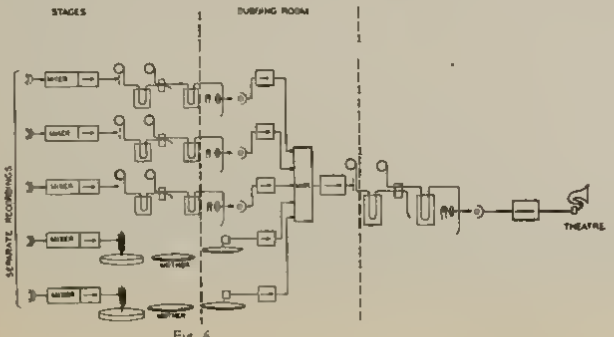

Fig 6

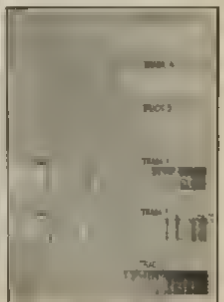

Fig 7

As the Editor Sees It

JUST a half a century ago October 21, 1879 to be exact Thomas A Edison invented the first practical incandescent lamp On that historic day the light we know was born On that day Edison's envisioned dream materialized into solid fact and what is perhaps the greatest contribution ever made to mankind was given to a world that gasped in astonishment at the accomplishment of this practical dreamer.

On that day Thomas Alva Edison forever freed our vision from the bondage of darkness, trapped aand preserved for us beautiful sense impressions, banished night and made possible the spanning of the vast space between the waterfall and the home with taut and tiny wires carrying blessed light into the dark and dreary lives of struggling humans

What a contribution!

If Edison had contributed nothing else to humanity his name would still go down in the annuls of time as one of the world's greatest benefactors!

What a man is this Edison!

Born in the little Obio town of Milan on February 11 1847, he did not stand out as any youthful wonder of the town He wasn't even an apt pupil in the accepted sense of the word He was usually at the foot of the class

However, he had imagination He nearly ruined a farmer boy when he filled him with seidlitz powders in an attempt to create enough gas in his stomach to lift him from the ground He set fire to a baggage car on the railroad where he was working as a newsboy on trains This fire came from a phosphorus experiment he was making in a laboratory George Pullman had allowed him to erect in the car.

Then he learned telegraphy and became a wandering Knight of the Key But electricity constantly challenged him, and he met that challenge with the invention of the incandescent lamp—and other inventions that have made him an International hero

Eventually quitting his wanderings he settled at Menlo Park New Jersey, and in his little laboratory developed the electric lamp and the talking machine motion pictures and many other marvelous inventions There he brought joy and happiness to a universe

And now another great man has come forward to give the world a lasting monument to Edison and his genius The man is Henry Ford Ford, one of Edison's greatest admirers and warmest friends, has transplanted historic Menlo Park to Dearborn where Ford has erected an Edison Shrine The laboratory of Edison, all the physical surroundings of those historic days have been transplanted and brought back to the original condition by Mr Ford At Dearborn the banquet on October 21 will be held and Ford will have completed more than a year of work in preparation of an event that should stir the world

Outstanding in the celebration is the fact that Edison is alive to accept the homage paid him So often our heroes have passed on before a world realizes their importance and honors them as they richly deserve.

To Thomas Alva Edison world benefactor, genius, gentleman, the American Society of Cinematographers, of which he is an honorary member pays homage

Christmas Presents

WHAT shall I give John for Christmas?" Although it is only October, this question is on the minds and tongues of thousands who on Christmas morning take real delight in seeing their loved ones' faces light up with joy as they unwrap the packages Santa has placed on the tree This year, why not give something photographic or Cinematographic? Has friend wife or friend husband been admiring the 16mm camera that the neighbor next door has been using? Why not give him or her a home movie camera? Perhaps the young son is your problem If he is old enough, why not give him a camera?

And then — maybe friend husband has a camera Why not get him some new piece of equipment he has been wanting? Glance over the advertisements in this magazine There you will find all kinds of suggestions which will bring joy to the heart of a husband, wife, son, daughter, sweetheart or friend who is photographically inclined

This is just a thought which we believe is a timely and good one Make this a photographic Christmas And—do your Christmas shopping early.

Sound School

THE Academy of Motion Picture Arts and Sciences is to be commended for the course in sound which it is now conducting Sound apparently is here to stay. Such pictures as "The Cock-Eyed World" with its tremendous box office receipts at the Roxy Theatre in New York, proves that

What is more necessary than that the studio workers all become somewhat familiar with the sound problems? The American Society of Cinematographers recognized these needs some time ago and started off on the right foot by holding a special meeting with the Sound Engineers to discuss the problems Now the Academy is conducting a sound school and the response has been so great that two sections are needed to care for those desiring information Another step in the right direction by the Academy Whoever conceived the idea is to be congratulated. What the motion picture industry needs is less politics, fewer relatives, more promotions from within its own ranks—and more men striving to give knowledge that will eventually give us better pictures.

Congratulations

FELICITATIONS appear to to be in order for F A Hartwell, publisher of the *Hollywood Magazine*, and Paul Thompson, who is probably as well known in New York as is Times Square.

The occasion is the selection by Mr. Hartwell of Mr Thompson to assume the post of managing editor of his magazine. It was many years ago that this writer first met Paul, and through the passing years Paul has proven to be a man you like better as each milestone of time passes. Men like that are rare.

A writer of ability, a man of brains and resourcefulness, a thinker, a worker a genius in the art of creating photographic ideas and carrying them through Thompson should make his presence felt on the Hollywood Magazine which is now assuming a unique position in the field of motion picture publications because of its policy of telling the story with pictures."

Greetings

HOLLYWOOD should look with pride at the building located at 1606 Cahuenga Avenue, for there, during the month of September, a new engraving plant was installed that is the last word in modern equipment and personnel.

Ordinarily, the start of a new engraving plant is not of great moment. However, in this case it is worthy of comment because of the men behind it Victor J. De Mamill, George C Grier, Harry L. Read and Jack Conlan are the men And they deserve congratulations and support because they are examples of young hustlers of the type that has made the world think that there is more opportunity in America than anywhere else. Perhaps there is, but usually you find that it is the individual who creates his opportunity by thinking, working and just plain hustling The Superior Engraving company starts with the best wishes of many in the picture industry who know the men behind it

Excuse Us

DUE to lack of space we have been compelled to omit this month's installment of the paper on Some Properties of Fixing Baths The third part of this interesting paper will appear next month

Also, due to unavoidable circumstances, Mr. Joseph A Dubray has been unable to furnish us with his article on A, B C of Sound We regret the absence of Mr Dubray's article as much as our readers and assure you that we expect it next month

Speaking of next month makes it timely for the Editor to explain that he is going to the S M P E Convention at Toronto, October 7 to 10, and will do his best to give you all a rousing story on the big events of this meeting.

—Photo by J Curtis Fetters, A S C

A California Landscape

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The Little, Old, Red Schoolhouse

THE boys and girls and young men and women are all gathered for another year in the various institutions of learning throughout the country. So, what could be more fitting than that the big boys of the motion picture production center go to school

The Academy of Motion Picture Arts and Sciences is to be congratulated upon giving this opportunity in connection with its new school of the Fundamentals of Sound Recording. The school, as is brought out in the cartoon above by Mr. Kershner, has met with success From all the studios men have poured forth for knowledge

It is a great thing to make available to the members of the profession this invaluable knowledge of sound recording, but it is an infinitely greater thing to engender such a spirit of universal cooperation as this course is doing

For, throughout the history of the motion picture, its greatest curse has been the lack of a united cooperative spirit. Suspicion, favoritism and clanishness have blighted its course from the very start, and have obstructed its progress toward its rightful place among the great Arts What progress has been made has been made in spite of these obstacles, and is due more to the inherent greatness of the motion picture than to any concerted effort on the part of those within the industry. Motion picture workers are in many ways one of the most intelligent groups of workers in the world, but they have been inconceivably slow in grasping the fact that what benefits the industry as a whole also benefits the individual For the motion picture is unique alike among the world's Arts and among its great industries It is the one Art to achieve the complex status of modern Big Business, and the one major industry to be entirely dependent upon an Art for its success Thus it has the complexity of Big Business but is yet dependent upon many of the fundamental rules governing successful Art

Chief among these is that, if the Art be one which is dependent upon the efforts of more than a single individual, there must exist between the various collaborators a complete understanding and spirit of cooperation, if the product is to be successful. A great sculptor, for instance, may create a masterpiece in the clay, but unless there exists between him and the several workers to whom he must entrust the task of making the bronze casting from his model a complete mutual understanding and cooperative spirit, the result is likely to fall short of the perfection of which they all dream It is the same with a motion picture only in an infinitely greater degree. There are involved in its making the contributions of so many individual artists and craftsmen, and these are so intricately interrelated, that there must be flawless cooperation between them all if the finished product is even to approach perfection And that cooperation is only obtainable through perfect mutual sympathy and understanding

It has often been pointed out that the motion picture's greatest needs were Education and Cooperation. Education is advisedly placed first, for, if screen people can be educated to appreciate each other's problems, be given an insight into the lives and work of their fellows, the cooperative spirit is bound to follow. This was true in the days of silent pictures and it is inceeasingly true now that the talking film has come with its amazing complication of everyone's problems, and its flood of new personalities. Within the last year this great Art-Industry has been completely revolutionized. New problems confront everyone, whether newcomers or long established screen workers New problems arise almost daily; problems which demand thorough mutual cooperation and understanding for their solution. And the only way to ensure such understanding is to deliberately educate screen people to an appreciation of each other's work, and thereby eradicate the widespread misunderstandings which have fostered suspicion and mistrust among them.

Therein lies the greatest value of the new Sound School Conceived primarily for the purpose of spreading throughout the industry an appreciative understanding of the technique and problems of the sound recording departments, it cannot fail to be of inestimable value in fostering a spirit of mutual understanding and helpfulness in all other fields It has always been the policy of the American Society of Cinematographers to strive to implant and further this spirit, not only among its own members, but, in so far as possible, among all of the other arts and crafts of the industry as well Therefore it is with a spirit of sincere approbation that the American Cinematographer hails this new effort, and bespeaks for it the greatest success May it be the beginning of as great a change in the spirit of the screen world as Sound has made in its technique May it be the beginning of a movement that will never cease until the world behind the screen has attained that perfect spiritual solidarity it so urgently needs!

Recording

(Continued from Page 9)

state From the standpoint of the changes involved, synchronizing and re-recording are similar, as shown on Figures 5 and 6

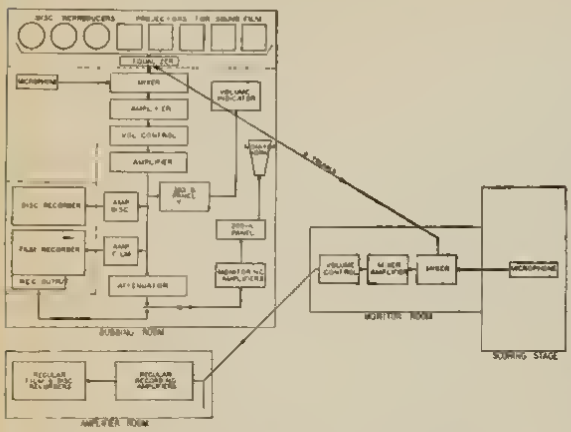

Fig 8

These latter processes involve 25 changes of condition when re-recording from film to film and 22 changes of condition from disc to disc

The changes in condition in the re-recording process are as follows:

	Film		*Disc*
0	Sound	0	Sound
1	Mech. Motion	1	Mech. Motion
2	Small Current	2	Small Current
3	Large Current	3	Large Current
4	Mod. Light	4	Mech. Motion
5	Latent Image	5	Soft Wax
6	Metallic Image	6	Mother
7	Mod Light	7	Hard Wax
8	Latent Image	8	Small Current
9	Metallic Image	9	Large Current
10	Mod Light	10	Mixing
11	Small Current	11	Large Current
12	Large Current	12	Mech Motion
13	Mixing	13	Soft Wax
14	Large Current	14	Master
15	Mod. Light	15	Mother
16	Latent Image	16	Stamper
17	Metallic Image	17	Hard
18	Mod Light	18	Mech. Motion
19	Latent Image	19	Small Current
20	Metallic Image	20	Large Current
21	Mod Light	21	Mech Motion
22	Small Current	22	Sound
23	Large Current		
24	Mech Motion		
25	Sound		

It was found desirable to arrange the amplifiers in the reproducing circuit so as to reduce mechanical vibration to a minimum. Special amplifiers were built to meet the requirements of re-recording work.

It was also necessary to carefully guard against noise being introduced by circulating currents and foreign potentials.

The process of recording is such that there is a tendency for the low frequencies to be relatively over emphasized This tendency is not objectionable in the original recording but becomes undesirable in successive recordings, since it is cumulative Fortunately, it is possible to do almost anything desired with the frequency response of the electrical portion of the system, hence it was only necessary to design an equalizer to counteract the over emphasis of the low frequencies Due to the variation of different records the equalizer was made adjustable

Photographs illustrating dubbed sound tracks are given on Figure 7. The process of dubbing two separate records together is illustrated by track 4, which was produced by combining tracks 3 and 5 The original tracks 3 and 5, are single frequencies A re-recording composed of speech and music is illustrated in track 7, being the combination of tracks 6 and 8 From an analysis of track 7, its component parts could be shown to consist of tracks 6 and 8, although with such complex sounds it is not as apparent to the eye as the dubbed track composed of two different sine waves illustrated in track 4 Track number 1 has been combined from two separate records of music and dialogue. This record was then re-recorded four times, track number 2 in the picture being the fifth successive re-recording It will be noticed that successive re-recordings tend to diminish resolution, which of course affects quality. When the fifth re-recording is projected and the sound compared with the original recording the quality is not greatly impaired Such an experiment as this requires the utmost care and supervision, but indicates the possibilities of re-recording In general, although each re-recording actually introduces a slight loss in quality in some cases defects in recording, such as "tubbiness" may be artificially improved.

The processes outlined are in a stage of development: consequently the space allotted to this equipment and the type of layouts in the various studios are by no means uniform. It may readily be appreciated that in scoring a picture, the standard recording channel can be used as the pickup is by microphone, as in regular picture production, and the mixing is essentially the same. This also holds for the synchronizing operation such as adding sound effects to a completed picture In the case of re-recording, it is desirable to adjust the volume of the output of the disc and film reproducers so that it may readily be mixed with musical accompaniment and sequences, and thence put through the regular channel Due to the threefold function of dubbing, it is, of course, desirable to provide for utmost flexibility in the wiring scheme, as indicated to some extent in Figure 8 This, of course, applies to the signaling and motor system, as well as the transmission circuits

Each studio is providing room for dubbing equipment consisting of film and disc reproducing apparatus, a mixer and monitoring facilities For suitable monitoring, it is necessary to surround the film reproducers, which are modified projectors, in sound-proof booths to eliminate noise from this source. In some cases one of these projectors is also arranged to throw the picture on a small screen in order to cue sound effects taken from stock records. One studio is enclosing a section of the dubbing room in sound-proof walls for microphone pickup as shown on Figure 9

For re-recording or synchronizing, the mixing is done in the dubbing room and the output of the mixer may be connected to any regular recording channel. This is being done in many cases and is only open to the objection that it ties up a regular channel which may be under a heavy production schedule Where this is to be avoided, a separate complete recording channel is provided in the dubbing room. This usually consists of the standard amplifier equipment with one disc and one film recorder Another advantage is that, with all the equipment thus concentrated in the dubbing room, a smaller personnel is required for the re-recording operation

For scoring purposes, a sound-proof stage of sufficient size to accommodate a large orchestra and a variety of sound effect apparatus, and provided with the usual recording stage monitor and control equipment, is used.

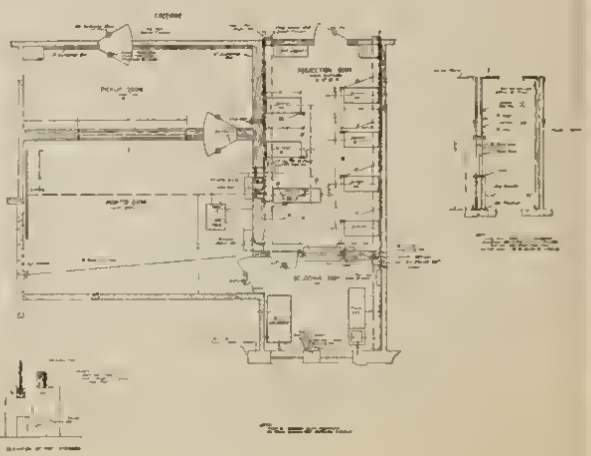

Fig 9

New Bell & Howell Engineering Development Building

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The expansion of its work in the development of cinemachinery has led to the establishment of the Bell & Howell Engineering Development Department as a self-contained unit, dedicated to the future success of the industry. To house this department a special laboratory has been constructed. Its equipment is the finest in the world, its staff includes the leading engineers in this field. Inquiries and assignments on any phase of design and manufacture of motion picture equipment are invited.

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AN EXPEDITION TO NGATANGUAL

Being the Personal Narrative of One of The A.S.C's Best Known Globe-trotters

By LEN H. ROOS, A. S. C.

Mr Roos has just returned to Hollywood from a lengthy stay in Java and way stations His tales of adventure have been so startling that the Editor finally accused Mr Roos of trying to teach followers of Anania how it is done However, Mr Roos sticks to his story which we pass on with admonition, 'Believe it or not'"—THE EDITOR

ON SEPTEMBER the Tenth, 1928, I was in Sydney, Australia, admiring their beautiful harbor when I was approached by a tall, dark individual with blonde hair. I waited for him to offer the cigarettes so that I could try my new lighter. As soon as we had both found our matches he launched into a long tale of some strange people whom he had heard of through a snake charmer of his acquaintance. On noticing my intense interest, he produced a chart and suggested we form an expedition to find these odd fellows. I informed him that my business was making Motion Pictures, and upon his learning that business was rotten, he suggested that he would furnish the ship and crew if I would make the pictures. The proceeds of the sale (if any) of these to be divided evenly. He was to take twenty per cent of the gross returns (if any) and I, eighty.

We hunted up my attorney, whose office was in the Marble Bar, and signed the papers. I hurried off to purchase film and other supplies. I felt that if these island people could be located and looked anything like his description of them, it would be a wonderful story, so I arranged to take plenty of negative. I had the two 400-foot rolls sent to the ship which was twenty feet long with a forty-two-foot beam. She carried two mizzen masts abaft the galley and had three anchors; one at each side and one at the back. A feature of this craft was her engines. They were 12-gauge double-barreled semi-reversible with forced draft and ran on tar. The engineer's name was Mac something or other. On September 12th we hove up the two front anchors, baited the rear one and then set sail for the Island of Ngatanguae.

His Greatness

As soon as we were out to sea my partner whose name was Horace appeared and ordered the Captain to change his course. The Captain had been steering more or less to the left, but upon receiving the order from Horace he steered more to the left and we ran into a fearful blizzard. Waves of unbelievable height pounded against our bows and the hail stones were as big as oranges. There was only one thing to do. We hove two and parked the ship for the night. We successfully rode out of the storm and the morning broke fine and clear with the sky full of fleecy Panchromatic clouds and the sun just coming over the Port binnacle. One of the crew hastily removed the binnacle and the sun came up with a rush.

We made steady progress for several days and nights, the runs being as follows: Sept. 13th, 120 miles; Sept. 14th, 50 miles; Sept. 15th, 322 miles; Sept. 16th, no record of this run as the Captain forgot to set back the speedometer. As this threw my reckoning all out, I did not bother to keep track of dates or runs from that date. The cook used the calendar to light the fire, so we lost track of time.

"So I went up the mast

After several days of the frightful pace we ran into a calm and the engines ran out of tar. Horace, who had taken command and who had turned into a bullying person, ordered everyone aloft to tack up the sails. I am not a sailor and when he ordered me to take a tackhammer and some tacks and put up the top-gallant sails, I rebelled. Forthwith Horace drew a pistol and ordered me up. There was nothing left to do but play the hand so I adjusted the ship's climbing spurs and went up the mast. This was much worse than the shakiest parallel I have ever been on and when I dropped my hammer I received a great deal of abuse from Horace.

We were becalmed for days and as food was running short I became alarmed. We were on our last choice of French pastry when someone suggested hauling up the baited anchor at the back of the ship. We hauled this up and found that we had caught a Prawn. This cheered us greatly and I shall never forget the roast Prawn dinner which was served that evening. Days of waiting and no wind. The water began to get very brackish and the ship began to leak. Things looked bad until I remembered I had an extra role of tape in my film box and after getting this I went below and taped up the leak while the crew bailed out the ship.

That night the weather freshened and by midnight we were racing along with all canvas spread. Either some ship was running without a tail light or our headlights were faulty as I felt a dull thud and heard the crash of glass. I rushed up on deck just in time to see a large ship moving away at a rapid pace. I was unable to get his number owing to the darkness and anyhow it required all hands at the pumps as the ship was sinking rapidly. Morning found us with a bad list to Starboard and it looked like we were doomed. After a thorough search we found there were no lifeboats aboard. When questioned about this the cook confessed that he had taken the lifeboat from the ship in Sydney to take his girl for a row and that as she decided to walk home he left the boat and took a tram and forgot to put it back. Just then one of the crew who was wiping water off the Bowsprit shouted 'What-ho! Land-Ho! to the right!'" and sure

(Continued on Page 36)

A scene from "Burlesque," a Paramount production

TAKING THE GREEN PAINT FROM THE BABY STAR'S PINK CHEEKS

THE soft, orange light struck from National Panchromatic Carbons (soft-arc) is particularly adaptable to close shots. The light is cooler. Gives true shade of flesh coloring without resorting to elaborate unnaturally colored make-ups. Takes green grease paint from pink young cheeks.

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Gentlemen: Enclosed please find check (or money order) for Five Dollars ($5.00) for which please send me, postage prepaid, one copy of your Cinematographic Annual as soon as it is off the press, which date will be April, 1930.

Name _____ *Address* _____

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Extensive Program Planned For S. M. P. E. Fall Meeting

THE greatest meeting in the history of the organization is the goal the Society of Motion Picture Engineers expects to attain when they gather at the Royal York Hotel, Toronto, for the fall meeting, October 7th to 10th inclusive.

It has been several years since the S M P E met in Canada, and the Canadian contingent is planning to make the engineers' visit there a memorable one. Even larger attendance figures than marked the New York meeting last spring is expected this month.

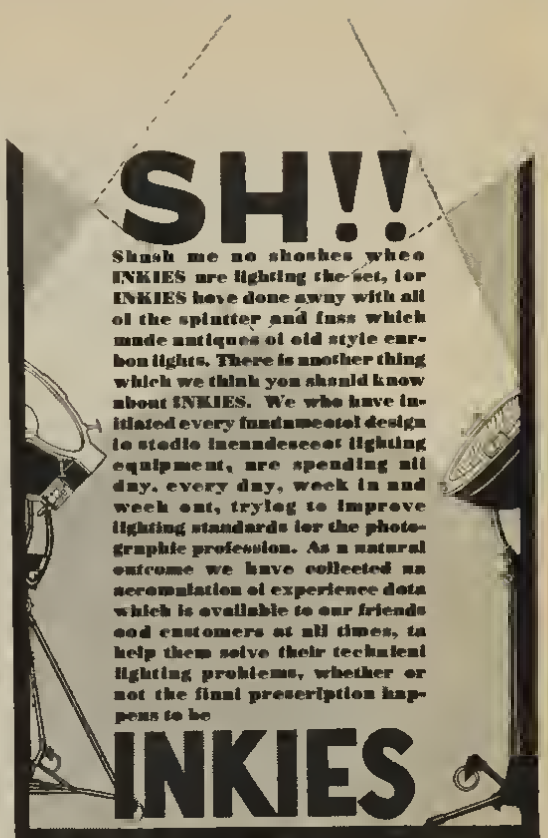
While there may be some changes in the program now outlined, the following schedule of events and papers, tentatively decided upon, will be as nearly correct as can be secured as this magazine goes to press.

MONDAY OCTOBER 7TH
President's Address by L. C. Porter
Committee Reports
'The Human Equation in Sound Picture Production'
by Terry Ramsaye Pathe Exhange Inc
Luncheon
"Some Characteristics of Sound"—A motion picture lecture
by Howard B Santee, Electrical Research Products, Inc.
Reactions of the Public to the Talking Picture
by Harold B Franklin, Fox West Coast Theatres
The Sound Film Situation in Europe' by M D Gulden
Motion Picture Division Department of Commerce
'Cinematography in Soviet Russia'
by Leon Moussoux, Amkino Corporation
"Sound Films of Surgical Instruction" by Dr E P Truesdale
American Medical Association Gold Medallist
Get together Dinner
Preview of Forthcoming Sound Film Productions

TUESDAY, OCTOBER 8TH
The Trail of the Mitrophone'
A motion picture lecture tour of the Hollywood Sound Studios
'Some Fundamental Principles of Sound Recording and Reproduction'
by Wm H Offenhauser RCA Photophone
'The Principles of Sound Recording and Reproduction by the
Variable Density Photographic Method by D MacKenzie
Electrical Research Products Inc
'A Demonstration Talking Film by Dr Kingdom
General Electric Company
"Studio Acoustics and Microphone Placement
by J P Maxfield Electrical Research Products, Inc
Luncheon
'Theatre Acoustics by S K Wolfe
Electrical Research Products, Inc
'The Optics of Motion Picture Production'
by Professor Arthur C Hardy, Massachusetts Institute of Technology
A New Method of Blocking Out Splices in Sound Film
by J I Crabtree and C E Ives, Eastman Kodak Company
'Photographic Characteristics of Sound Recording Film'
by L. A. Jones and O Sandvik Eastman Kodak Company
Characteristics of Loud Speakers for Theatre Use
by D G Blattner Bell Telephone Laboratories, Inc
No Evening Program

WEDNESDAY OCTOBER 9TH
'Lubrication of Sound Film by J I Crabtree, D Hindman,
C E Ives and O Sandvik Eastman Kodak Company
"A Film Numbering Device for Cameras and Recorders
by M W Palmer, Paramount Famous Lasky Corporation
"Dimensional Analysis as an Aid to Miniature Cinematography'
by G F Hutchins General Electric Company
"The Film Perforation and Means for Its Measurement
by W H Carson, Agfa Ansco Corporation
'Camera Mechanisms—Ancient and Modern
by Arthur S Newman, London England
Luncheon
"Early History of Motion Picture Cameras for Film Wider than 35mm
by Carl Louis Gregory
"Possibilities and Problems of the Wide Film'
by Lorenzo Del Riccio Paramount Famous Lasky Corporation
'Rectangle Proportions in Pictorial Composition'
by L. A. Jones, Eastman Kodak Company
'Wide Films and Standardization'
by A S Howell and J A Dubray, Bell & Howell Company
'The Wide Film from the Recording Standpoint'
by C A Tuthill Paramount-Famous Lasky Corporation
"Artistic Considerations in Sound Film Production'
by Joe W Coffman Carpenter Goldman Laboratories, Inc
Banquet (If this is the time for the banquet designated by
Arrangements Committee)

THURSDAY, OCTOBER 10TH
"A Rapid Method of Determining the Degree of Exhaustion of a Developer"
by M L Dundon, G H Brown and J C Capstaff, Eastman Kodak Co.
Burn Out Phenomenon of the Tungsten Filament
by Gurton T Fonda General Electric Company
'Water Cooling of Incandescent Lamps'
by Dr Newell T Gordon
General Electric Company
Radiation Characteristics of Two Mercury Arcs
by A C Downes
National Carbon Company
Some Properties of Chrome Alum Fixing Baths"
by J I Crabtree and J F Ross
Eastman Kodak Company
"Standardization of Motion Picture Screen Size or Aperture'
by John F Seitz President A S C, and John Arnold, Chairman
A S C Research Committee and a paper on
'Double Exposure Work in Sound' by Wm Stull A S C.
Open Forum
Other papers are forthcoming but titles and authors are not yet definitely
ready for announcement


SH!!
Shush me no shoshes whee INKIES are lighting the set, for INKIES have done away with all of the splutter and fuss which made antiques of old style carbon lights. There is another thing which we think you should know about INKIES. We who have initiated every fundamental design in studio incandescent lighting equipment, are spending all day, every day, week in and week out, trying to improve lighting standards for the photographic profession. As a natural outcome we have collected an accumulation of experience data which is available to our friends and customers at all times, to help them solve their technical lighting problems, whether or not the final prescription happens to be
INKIES
If it isn't an it isn't an INKIE
MOLE-RICHARDSON, INC.
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HOLLYWOOD, CALIFORNIA

It is reported that a contract establishing a collaboration, with a view to production of German sound films, has just been concluded between the Aafa Film Aktiengesellschaft and the Tobia. These productions are to be distributed through the Aafa organization. Both Companies are expected to place their entire technical and artistic staff at the disposal of the new production plant.

Ufa has started the production of the first German publicity sound film.

France

Wenengeroff Film (Germany) has concluded an agreement with Star Film (France) according to which a feature film is to be taken in hand by the Companies as a joint production. This film will be an adaption of "L'Etrangere" by Alexander Dumas. Dialogue sequences are to be made in French, German, and English.

INCANDESCENT
"Klieglights"

THESE new Kliegs in which high-candle-power incandescent lamps are used for the light source, furnish brilliant, evenly diffused light high in actinic qualities, permitting photography with clearness of detail, full color values, sharp definition, and freedom from sound interference. They are absolutely noiseless in operation, are efficient in light control and utilization; and afford complete command over the direction, diffsion, and divergence of the light beam

◆

Write for latest Bulletin which describes these and other Kliegl studio lights—and explains how they are used in motion picture and sound photography

KLIEGL BROS
UNIVERSAL ELECTRIC STAGE LIGHTING CO., INC.
321 WEST 50th STREET
NEW YORK, N Y.

Benoit Now Director

NEWS just received from France reveals the fact that another member of the American Society of Cinematographers has been made a motion picture director The latest A S C man to take over the megaphone is George Benoit who some time ago left Hollywood for Paris Benoit's past few months have been very happily spent as a cinematographer But he now writes that he is about to start work on a picture with a locale found in the French coal mines

In addition to directing this picture, Benoit will have the unusual distinction of being in complete charge of the photography as well as the direction of the action.

A new studio, built under Benoit's personal supervision, will house the production He is signed to do a series of six pictures in which he will be director and also director of photography

NEW SOUND PROJECTORS SOUGHT FOR BATTLESHIPS

PRESENT sound projection apparatus has not been developed suitably for use on battleships and the Bureau of Navigation is seeking a new type of talking picture device, states a report to the M P Division of the Dept of Commerce.

Silent films suitable for Navy use are still being produced, but the limited number makes necessary the reduction of the supply of programs to the fleets. To maintain the fleets with sufficient programs for the average exhibition of 28 programs per month requires the purchase of 30 programs a month and this, at present writing, is impossible unless a lower standard of quality of programs is accepted. The Navy motion picture service will probably, by aid of the foreign market, be able to obtain 20 programs a month during the coming year, necessitating an increase of 30 per cent in "resbows" or a reduction in the number of programs exhibited each month by the fleet, continues the report.

Duty On Lenses

ANY cameraman going abroad should be certain that he make correct arrangement with customs officials before he leaves, otherwise he may have to pay duty on his lenses to get them back All that is necessary is to declare the numbers on the lenses before leaving. Then your return will be minus grief

Cinema Equipment Co. Announces New View Finder Bracket

THE Cinema Equipment Company of Hollywood again announces another clever device for use in connection with motion picture cameras The latest Fearless product is called the Feerless Finder Bracket, and is for use on Bell & Howell cameras

Jackson Rose Tiffany-Stahl cinematographic ace is responsible for the suggestion that resulted in this new device Ralpb G Fear head of the Cinema Equipment Company saw the possibilities in Mr Rose's suggestion of a view finder bracket attached to the tripod head instead of the camera, as is the present practice and immediately designed and put into production this time-saving device

The distinct advantages of this Finder Bracket is instantly apparent to the cameraman The view finder does not move as the camera head is shifted, but always remains in a fixed position.

The Fearless Finder Bracket is an aluminum casting of rugged construction and machined to insure an accurate fit to the tripod head By reason of this accurate fitting, absolute rigidity of the view finder is assured

All of the features of the view finder are retained, enabling the cameraman to swing the finder ont of position when opening the camera door for threading, etc

The Finder Bracket may be detached in three seconds Loosening two knurled screws, which are a part of the bracket and cannot be lost or misplaced, is all that is necessary.

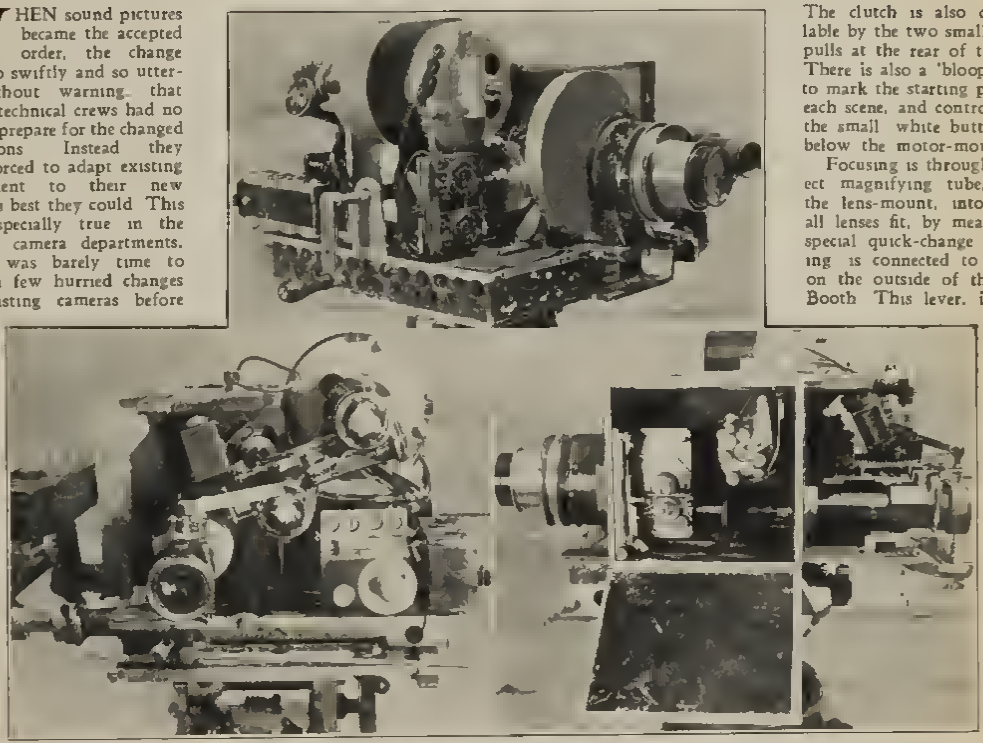
The Fearless Finder Bracket is so moderately priced that no Bell & Howell owner can afford to be without one

Recent Releases of A. S. C. Members

"The Girl from Havana" —Fox—J A Valentine
"Masquerade"—Fox—Charles Clarke
"The Wild Party"—Paramount—Victor Milner
"Our Modern Maidens"—M-G-M—Oliver Marsh
"The Gamblers"—Warners—Wm. Rees
"The Flying Fool"—Pathe—Arthur Miller
"Big Time"—Fox—L W O'Connell
"The Great Gabbo"—Sono Art-World Wide—Ira Morgan.
"Jealousy"—Paramount—Al Gilks

STUDIO ENGINEERS DESIGN NEW SOUND CAMERA

WHEN sound pictures became the accepted order, the change came so swiftly and so utterly without warning that studio technical crews had no time to prepare for the changed conditions Instead they were forced to adapt existing equipment to their new needs as best they could This was especially true in the various camera departments. There was barely time to make a few hurried changes on existing cameras before they were locked into their booths for the new venture No one had either the time nor the experience to evolve a camera especially for sound work



Front, rear and side views of new sound camera developed at Paramount Studios

Now, however things are changing The camera staffs of the major studios have gained after almost a year of practical experience in sound production, a rather definite idea of what additional features are desirable in a sound camera Accordingly several of them have been developing experimental apparatus with a view toward the production of some which will more perfectly meet their new needs One of these is the new Paramount camera, the joint product of that studio's camera and engineering department, and probably the first instrument designed exclusively for sound-film camerawork

Primarily, the Paramount Camera is intended for use in that studio's Baby Booths, but it may also be used independently for silent inserts, etc As the illustrations show it is fitted with a standard, high-speed movement, with, of course all gears and bearings treated to reduce operating noise The motor, it will be observed, is in a unit with the camera greatly increasing its potential mobility. The drive is through positive silent gearing, with automatic clutch, which disconnects the motor while the camera is being threaded, or in case of a buckle in the film The clutch is also controllable by the two small chain-pulls at the rear of the case There is also a 'bloop-light,' to mark the starting point of each scene, and controlled by the small white button just below the motor-mount.

Focusing is through a direct magnifying tube, while the lens-mount, into which all lenses fit, by means of a special quick-change mounting is connected to a lever on the outside of the Baby Booth This lever, in turn, is connected with an indicator which works along an accurately calibrated scale on the base-plate of the camera This scale is removable so that only one set of markings need be on each scale eliminating the errors likely where several sets of calibrations are crowded onto one scale The pointer is illuminated by tiny 'peanut' lights near its tip so that even in the darkness of the Baby Booths the focus may be altered and followed with absolute accuracy The finder-mount is also connected with this focusing device, and moves with it to compensate for the changed angle necessary when focused on near objects

In all the Paramount Camera represents a very interesting and noteworthy attempt to meet the cinematographer's needs under the new conditions While it is as yet largely an experimental model, the existing example has none the less had several months of service under actual production conditions and has proven itself a thoroughly successful design Whether it will in the future become the standard equipment of the Paramount units is not known but at least it marks an important forward step in the evolution of new-era cinematographic equipment

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CINEMATOGRAPHIC ANNUAL

Elephant Hunt

(*Continued from Page 3*)

eight large elephants arrived from Chneg Mai after being on the trail for nine days When they came into town I think almost everyone knew it for they were some of the largest ones I had ever seen, with extra long tusks for fighting Later in the day we went over to see them at closer range when I got acquainted with the baby I was to ride during the hunt He was a nice little boy measuring aroung eleven and a half feet high from the ground to his back and is the one the King always rides when he visits in Chieng-Mai After figuring him out awhile I got the Chinese carpenter back who had built the stands and had him get them fastened into the howdahs I had them made so I could screw the head on to hold the camera against the wear and tear of the jungles I was successful with mine but my second camera was not so fortunate. The native boy whom I have taught to operate a camera had his mounted as mine was and during the hunt when we were separated, his elephant suddenly gets mad and runs away with him, the camera, mahouts and all, ripping the camera away from the stand and howdah and totally wrecking the camera—to say nothing of the boy's nerves in his speedy ride through the jungles

FEBRUARY 12TH

Broke camp in Chieng-rai early in the morning and loaded three bullock carts with the camera equipment and food, etc , and started for the base camp out in the jungles

FEBRUARY 13TH

Slept fairly well last night Up early and went out looking for deer but found only some old tracks Back to camp and got camera equipment on up to the ceremonial camp where the mahouts were going through the jungle ceremony before going on the wild elephant hunt Prince Svasti and family arrived on some of the big hunting elephants and the ceremony began

Each mahout who has never been on a wild elephant hunt before has to have his head shaved, or at least cut short, is blessed by the priest—the high mahout— and baptised in the nearby river They are given the rulings of the hunt which is that they cannot think of home or the ones they love at any time during the hunt must never think of their discomforts and live as close to nature as possible All jackets and shirts must be discarded and go bare from the waist

The ceremony itself runs something like this

After the mahout's hair is cut at the camp they have established, they go on down to the river bank where all the mahouts who have never taken part in a wild elephant hunt before are squatted to receive all the blessings, etc , from Kruba-Jun who is the head of all hunters and one of the highest esteemed men in the country. He can give other mahouts permission to do things contrary to certain laws of the jungle because he can redeem them by prayers, but if he himself does wrong no one can help him or the others and the hunt is called off He has caught the largest number of elephants single handed of any one man in the country of Siam To date he has caught and trained forty.

He speaks the rites and the other mahouts repeat after him and as they chant they put small twigs into the ground with a small clearing the center. This represents the forest and the clearing their camp in the forest When they have finished their chants or prayers Kruba-Jun's assistant brings down a tray of roast chicken and other foods which is the ceremonial offering to the Angel of the Forest, and in their chants to the Angel they tell her that they are going into the forest without any self protection of any kind and are leaving themselves entirely in her hands After this part of the ceremony they all go into the river and duck themselves under a few minutes and on out again when they are all blessed and file back into camp, carrying the tray of foods

At the camp the Kruba-Jun teaches the rudiments of camp life—first building a lean-to with four upright bamboo poles and on this there are two cross members and from these two cross pieces there are spread out fanwise about six or eight bamboo poles On these poles there is spread a buffalo hide for protection from sun and weather During the day this hide is usually worn on the elephant. One other hide is placed on the ground for their bed After this they are taught how to make a fire and the business of cooking their rice by having a brass bowl of water boiling over which is placed a wooden bowl with holes in the bottom, in which the rice is placed for steaming They can use either matches or two pieces of bamboo rubbed together to form a spark.

Then a moderately small female elephant is brought into the camp and behind her a large hunting bull elephant He is loaded

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with the hunting ropes (before they are blessed) and a mahout put on the female's neck.

Note The reason for the male and female is that they feel they are going out to catch the offspring of a male and female and these are the representation they hold.

The female is driven by a mahout around a large circle with the small camp they are using in the ceremony in the center. She is followed by the hunting hull carrying the full hunting equipment, the driving and roping mahout on his neck and the other mahout on his rear, either standing or squatting. They circle the camp three times and then the hunting mahout takes his catching rope which is in two separate coils on the elephant's back and the noose which goes on the elephant's foot and is fitted with a bamboo sleeve Into this sleeve is fitted a long pole about twelve feet long This pole is held into the sleeve by a small bamboo peg When the elephant they are chasing is caught by the rear foot the pole is then wrenched out of the sleeve, breaking the small peg holding same In this ceremony they simply hook the elephant's foot but do not go through the entire routine of tying

If the new mahout misses hooking the elephant's foot, Kruba-Jun makes one circle around the camp and catches the female Each new recruit has to make this circling three times and roping the elephant's foot.

After this they go back to the camp-fire where the ropes and each new mahout is blessed

I had dinner with the Prince and his family when we talked over the hunt and back to camp and bed early.

FEBRUARY 14TH

Up early in the morning, herded the elephants together and went ont to look over some of the country. After cutting our way through the jungle bordering the river for about two miles, we came into beautiful elephant country, where we found numbers of trails of wild elephants but all old Turned south and made a circle and returned to camp around 2 p. m Got out all the washing preparing to leave for the hunt in the morning

FEBRUARY 15TH

All set and prepared to leave base camp at 8, but Kruba-Jun had to have another ceremony on the river bank so could not get away until ten. Crossed the river where we were camped and cut our way through bamboo jungle for an hour, finally coming out into open country—typical elephant country. We found all kinds of foot prints but all old Turned from there to the southeast, and traveled this direction until three p. m when we went into camp

FEBRUARY 16TH

Left camp around eight, leaving it intact to return to that night Followed trails all day through some of the d—est country I think I ever saw or tried to cross In fact some places you would never think an elephant could get through at all. There were a number of times that we got through when I never really knew how, but at the time you are so darn busy cutting your way through and taking care of yourself and camera you never think how the poor brute makes it. Followed trails by cutting and slashing for nine and one-half hours steady without a stop

FEBRUARY 18TH

Broke camp early in the morning. Went due east and crossed the three mountain ranges due east of us to work on the opposite side of the range. Trailed until around 4 p. m No lunch at all today and no stop Hit a fair place to camp but no water again —only a water hole While the boys were making camp I went to take a much needed bath. As we were camped into a bamboo forest I took two pieces of bamboo and put into the water hole to keep from getting stuck in the mud then waded ont on said poles and took the said bath After getting out and starting back to camp I found my right foot was covered with blood streaming out of several places My feet were covered with leeches and after getting them off and starting back to camp had to dodge about a dozen elephants which were all chained in the forest for their food They hobble their front feet with heavy chains so they are able to move a little at a time and get their food from the trees and brush. I finally came to the one I am using—a nice little boy about 11 feet high He was standing directly in the path with bamboo on either side which isn't exactly pleasant to try to walk through However, he decided I could go around him or else—so I had to call my mahout to come and lead him away. I returned to camp, got some medicine on my foot and the "Cookee" had dinner ready which was not hard to take after such a day.

FEBRUARY 19TH

Broke camp early in the morning again. Trailed np this valley

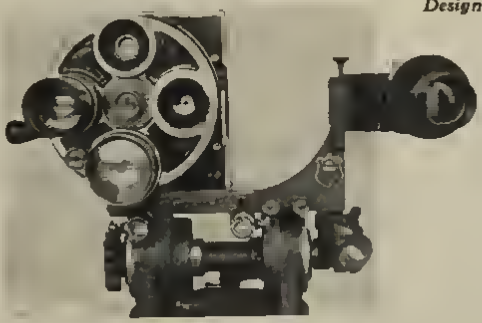
(*Continued on Page* 41)

THE FEARLESS FINDER BRACKET

For Bell & Howell Cameras

Suggested and Approved by Jackson Rose

Designed and Manufactured By RALPH G. FEAR



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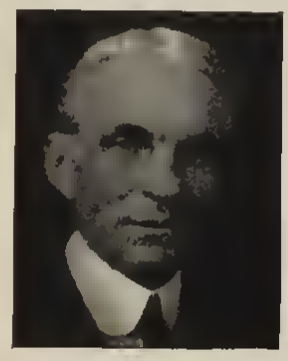
Historic Menlo Park Is Transplanted at Dearborn

PERHAPS [illegible] tribute of veneration of one human being for a contemporary mortal is the [illegible] which Henry Ford has built to physical surroundings of Edison in the days of his notable inventions. This is the laboratory and car shops in which he worked at Menlo Park now located at Dearborn.



Henry Ford

PERHAPS the greatest admirer of Edison. He has spent most of the past week in untiring effort to make the celebration of the invention of the incandescent lamp a success.

Memories!

THE WIZARD of Menlo Park smiles reminiscently as he muses before an historic machine while towering the Edison Museum with Henry Ford.

Prefacing the Climax

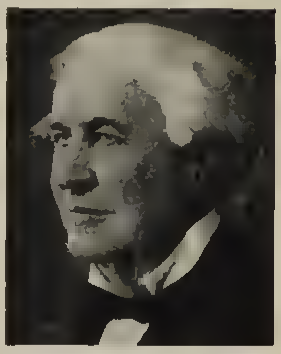
THIS MONTH the world bows at the feet of Thomas Alva Edison in [illegible] Ford has created a great Edison Museum at Dearborn in honor of the [illegible] preceded the removal of the historic laboratory in which he did his work [illegible] may see now at Dearborn where due to the work of Mr. Ford they will [illegible]

Where the Incandescent Lamp Was Born

IT WAS in this laboratory pictured above that Edison on October 21 1879 invented the incandescent lamp which dispelled darkness. This laboratory will be preserved for the future by the devotion of Henry Ford to his friend Edison. Here Edison worked when he made the world gasp with his results.

Light's Golden Jubilee

One of his invention fifty years ago of the incandescent lamp. Henry Ford and the event. Here we see the chief figures in the ceremony which took place at Menlo Park to Dearborn. All the buildings used by Edison 50 years ago remain as an Edison Shrine.—[photos courtesy of Light Magazine.]

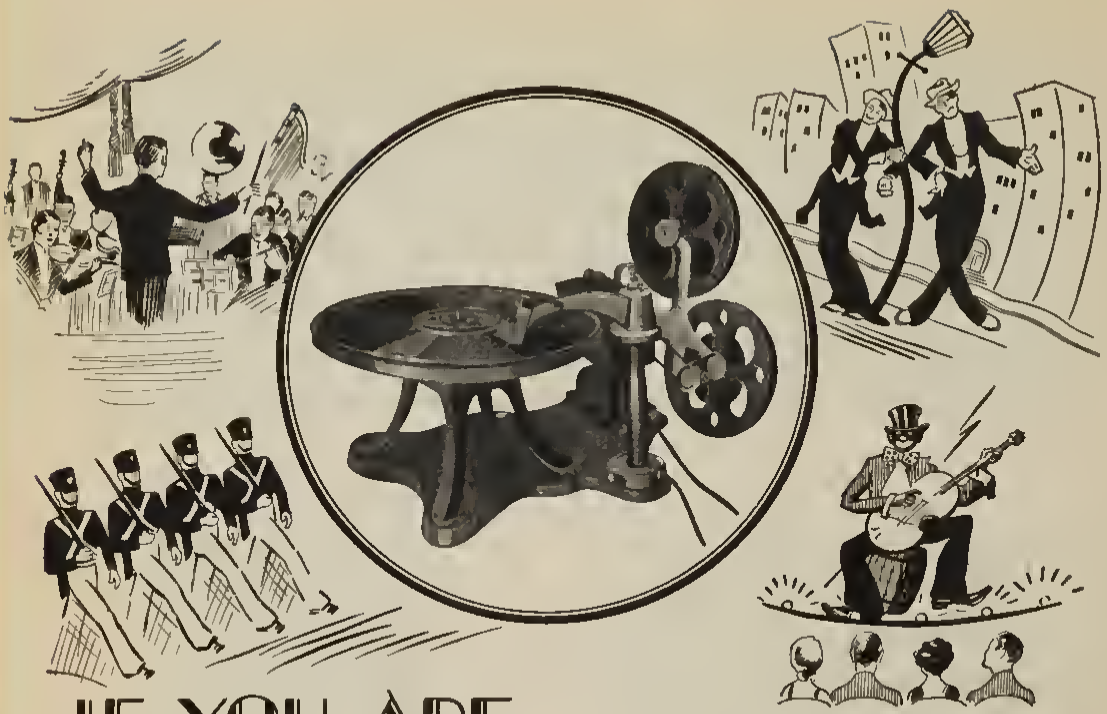


Thomas Alva Edison

FIFTY YEARS ago he gave the world the incandescent lamp. Today a world pays him homage as the world's most useful man.

For Posterity

EDISON writes his immortal name in the soft concrete at the Edison museum created at Dearborn by Henry Ford in honor of the 50th anniversary of the invention of the incandescent lamp.



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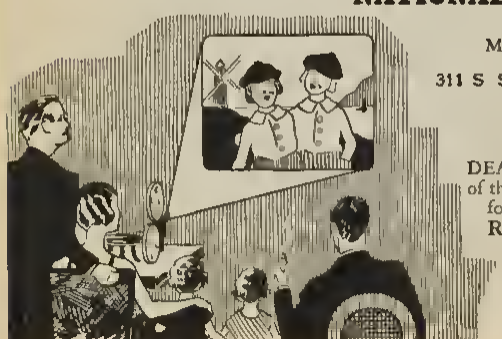

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Amateur Movie Making

Capturing Autumn's Tints

AS OCTOBER comes 'round again, it brings most of this world its most colorful season What opportunities Autumn's gorgeous colorings offer camerists! The riotous splashes of color that deck our trees and plants turn the countryside into one great paintbox. What glorious new opportunities there are now for cine amateurs! Until this year, the still photographer had all the best of it during the fall, for with his Autochrome plates he could capture all of Nature's surpassing tints, while the poor cinematographer had to content himself with the beautiful, but monochromatic, renditions of Panchromatic film and filters Now, however, he, too, may capture the colors themselves in their living glories, for to his hand have been brought not one but two excellent natural-color processes evolved exclusively for amateur use.

These two processes have met with such immediate success that there is no question as to the amateur's interest in color photography Moreover, during this same year, the trend of professional film production has also swung definitely to color, so strongly, in fact, that there is hardly a major studio in Hollywood whose program does not call for at least one all-color production during the season, while two firms have decided to use color almost exclusively for their entire programs And since color cinematography is so definitely established in the popular mind, a few words about it may not be entirely out of place here

Naturally, the starting-point of a discussion of any subject is a reasonably clear understanding of what is being discussed In this case we are discussing color as applied to cinematography so our starting-point must first be an understanding of color itself

Of course we know that color is the the mental result of the physical action of different light-waves on our optic nerves; but what is it that makes these results differ? Well in the first place we've not gone back far enough yet to reach the real source of color we must recall that *color* is a manifestation of *light*—so our real beginning must be light

Some Light on Light

Light, we know, comes from all incandescent or burning bodies, and is reflected by all others. Now, light itself is an electromagnetic wave-motion in the ether These light-waves are much the same as radio waves but they are broadcast on a shorter wave-length and at a tremendously higher frequency Instead of measuring their wave-length in metres, we measure it in ten-thousandths of a millimetre, and the frequency in hundreds of trillions per second No wonder we can t tune it in on our radios! These waves cover a rather considerable range of frequencies and wave-lengths, and the differences of these are responsible for the effects we call color.

Pure white light such as comes from the sun is a complete and perfect mixture of all these frequencies, but that that is reflected from the different objects around us is minus various frequencies, which have been absorbed by the object Thus, a red rose reflects those frequencies which give us the sensation of *red*, and absorbs all the others. Similarly its green leaves reflect the *green* vibrations, and absorb the others Thus it is with all colors: *black*, of course, means an almost complete absorption of all frequencies, while its opposite, white is a complete reflection of all frequencies *Gray* is merely an imperfect white: uniformly absorbed in all frequencies, cutting down the chromatic brilliance of the object though not necessarily lessening its *visual* brilliance

thermore, scientists havefound that white light may be reduced to three *primary colors*, which can be combined to form all the others These three are *red, blue, and green* they correspond to the three different units of our optic nervous system If all three units are excited equally, we get the effect of *white:* if they are effected inequally, we get the effect of color corresponding to that mixture of these primary colors. Thus it will be apparent that if we can make three photographs of an object, each one so filtered as to just record the proportion of the frequencies of the total reflected light in the picture that one of these three nerve-units would get, and then in some way combine the three, each having been colored its appropriate hue, we should get an exact reproduction of the object in its original color. This is the idea behind all color photography. In actual practice it has been found possible to use only two color-images—those of the red and green—and still get a fairly good color-picture Of course the loss of the blue means also the loss of absolute fidelity in the color representation for instance white is actually rendered as a pale yellow, which we see as white; but it also means such a degree of mechanical simplification that the sacrifice of perfect accuracy seems justified This is especially so in kinematography, where the mechanical difficulties are already so numerous.

Two Kinds of Color Process

But, whether two or three colors are used is not the chief difference between the various color processes Regardless of the number of colors used, all color photographic processes range themselves into two groups: ADDITIVE and SUBTRACTIVE processes *Every system of color photography thus far devised or suggested falls under one of these two heads* Some combine the two Briefly, in an additive process, the film itself carries no actual color the color-values are latent, and are revealed by appropriate filters placed or moved between the film and the screen. In a subtractive process, the picture is in itself a complete, self-contained, color-record, needing no filters or other special equipment for projection Each of these systems has its individual advantages and disadvantages For instance, the additive processes' films are in no way special, and may thus be handled in the ordinary manner; but at the same time, special apparatus is required for both taking and showing On the other hand, though the subtractive processes require special cameras and special processing, their films may be run on any projector —a great commercial advantage

Now, further than this, the additive processes divide into two categories: those whose separate color images are made and shown successively, depending upon persistence of vision to form the combined color-picture; and those whose separate color-images are taken simultaneously, and superimposed by projection, giving a single, complete color-picture on the screen Obviously, the first of these two is by far the easier to handle, but it has the disadvantage of creating a considerable strain on the viewers' eyes—generally causing severe frontal headaches from the optical effort of combining the several successive partial images into one complete colored one. In addition, these successive processes have another disadvantage: they often show a colored fringe around the edges of a moving object. This is natural for, in the simple case of, say, a hand in motion, it could hardly be expected that the red image, having been taken a fraction of a second after the green one would show that hand in exactly the same position Obviously, if the two were superimposed one on the other, they would be a trifle out of register, and leave a tiny clear space around the edges of the hand On the screen, then, one of those clear spaces will be red, and the other green, giving to the eye

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the effect of a flickering red and green fringe around the hand during its movement On the other hand, simultaneous images, whether projected from separate films, as in some systems or by a multiple lens arrangement as in others, naturally require a lot of extra apparatus, which is a serious drawback commercially. Incidentally if seperate films are used, the problems of maintaining exact register assumes unpleasant proportions

All in all, the problems of color cinematograhy are so numerous that it is a great credit to the many individual experimenters that the matter has been brought to its present successful stage where films in color are not only practical for professional use but available for amateurs as well The steps leading up to this present condition are many, and interesting, and even a brief review of the outstanding ones may prove helpful to the users of Today's perfected color systems

Early Efforts

It is not generally known but the first film made for screen projection—Jenkins', in 1895,—was in colors having been hand-tinted by a Mr Boyce A year later, Robert Paul, an English experimenter, also tried hand-coloring Anyone who has tried to color still pictures knows what a task it is to do a really perfect job on one single picture consider then the difficulty of coloring the tiny images on a movie film and then—think of the infinite numbers of these images in even a few feet of film! Paul finally achieved a colored version of his seven-reel production of "The Miracle," but the real miracle of it was the job of hand-coloring its 112,000 frames After fighting his way through to success in this matter Paul decided that the only thing to do was either to abandon colored films entirely, or put the coloring on a mechanical footing He chose the latter, and finally evolved a system of mechanically stencilling the colors through hand-made masks That this system is effective is evident by the fact that there survive today two improved stencil systems the famous and beautiful Pathecolor and the less-known but equally successful Handschiegl Process used for special effects by many of the American studios Probably the outstanding example of this process in most memories is its application to the torches of the soldiers in Marion Davies' hit of a few years ago, "When Knighthood Was in Flower"

However, two years after these first experiments in synthetic coloration another Englishman, Friese-Greene, developed what is probably the first process of true natural-color cinematography This was a complicated three-color additive process, using orange-red, green, and violet, and combining the successive and superposed schemes The pictures were taken on two separate films by an ingenious twin-lens camera, and projected by a similar projector; the color-cycles were echeloned so that the pictures partly overlapped That is, the left-hand projector would be projecting, say a green image, while the right-hand one was projecting its blue one Then the left-hand image would shift to red, after which the other would change to green and so on. To make matters more interesting the color-shutter was not a revolving disc, nor pair of discs, but a tinted film-band superimposed on the film! All told, it must have been a proposition capable of giving even the best operator nightmares Clearly, it couldn't be much of a commercial proposition and contemporary opinion doesn't indicate it to have been a vast success artistically either for the color-rendering is said to have been seldom good, and often entirely imaginary while the pictures were not only fuzzy but most unsteady Apparently there was still almost undiminished room for improvement

Kinemacolor

The next major development was the famous Kinemacolor process No one who ever saw them will be likely to forget the beautiful and spectacular scenes made by this process of the ceremonies attending the funeral of the late King Edward of England and the coronation of the present king culminating in the unforgettable scenes of his visit to India, and the impressively beautiful Durbar. Kinemacolor was a two-color, additive process pure and simple, and exhibited all the advantages and disadvantages of that type The films were made and projected at the rate of 32 frames per second—twice the standard There was only one film used in the camera but the shutter used was double, making one revolution for every two frames and exposing these frames alternately through a green filter and a red-orange one The film used was the ordinary stock, as no other was available in those days, but specially panchromatized by

(*Continued on Page* 33)

INFORMATION FOR AMATEURS

Amateurs—Send your problems to this department and have them solved by the world's finest cinematographers—the members of the A. S. C. This is your department. Our aim is SERVICE. Write us and find your answers here.

Question from L. R. S., Omaha: What is the difference between an ordinary long-focus lens and a telephoto lens?

Ans.: None, if their foci be the same except that the telephoto lens requires a shorter separation from the film. For instance, a six-inch lens must be separated from the film by approximately that distance, while a six-inch telephoto lens might require but half that, while giving an identical picture.

Question from P. L. R., New Orleans: What is the best diffuser to use—gauze, disc or soft-focus lens?

Ans.: For general use, the disc for it maintains the same brilliancy, contrast and quality throughout the picture. The gauze reduces the exposure and varies the contrast, graying the shadows, reducing the brilliance of the high-lights distorting the brighter points of light into innumerable little crosses of halation conforming to the mesh of the gauze. The soft-focus lens is pleasing, but limited to the one type of work.

Question from H. L. P., New York: Is Panchromatic film faster than the ordinary kind?

Ans.: No. However, its increased sensitivity to the yellow and red rays make it possible to get scenes with it in some lights where other film would fail—as in the late afternoon, for instance, when the sunlight is increasingly yellow.

Question from R. P. H., Chicago: Is it possible to take still snapshots of a projected movie on a screen?

Ans.: Yes, if you use a fast enough lens and sufficiently sensitive plate or film. As the screen is a perfectly flat plane, there should be no trouble in getting the focus sharp without having to stop down. Of course a fairly rapid exposure is needed to stop the apparent motion. As each picture is on the screen less than 1/32 second with a dark interval while the shutter is closed. An exposure shorter than this runs the risk of coming during the dark period, while a longer one may overlap two successive frames. It is always a good policy when making experiments of this nature, to arrange with the management of the theatre and to avoid disturbing your neighbors in the audience.

Question from L. D., Detroit: What is the purpose of the blue glasses through which cameramen inspect the scene before shooting?

Ans.: These blue glasses—technically termed 'Monotone Filters'—enable the user to check the actinic values of the scene and see how it will look in black-and-white. There are also special monochrome filters made for use with Panchromatic film and filters. They may be had either in the form of plain glass squares, or monocles or spectacles, and are made by the Wratten Division of the Eastman company, and by George Scheibe, of Los Angeles.

Question from S. P. H., Los Angeles: How can I arrange my projector so that the picture is thrown at right angles to its normal path? I have not sufficient space to use it normally.

Ans.: A small mirror, fixed in front of the lens might do, though with ordinary mirrors you would probably have trouble with reflections from both surfaces of the mirror. An optical mirror, such as the Bausch & Lomb Company uses on some of its 'still' projectors would be better, and would have a satisfactory long life if properly cared for. However the very best arrangement would be an optical prism, mounted on the lens; this would have, however, to be large enough to accommodate the enlarging beam of light as well as the one entering from the lens. It is possible that the device the Bell & Howell Company market as a 'Prismatic Eye' for their cameras, might do the trick.

Deardorff Builds Unique Commercial Still Camera

MANY of our readers will be interested to learn of the new and highly efficient Commercial still camera made by the firm of L. F. Deardorff & Sons of Chicago. This camera is the invention of L. F. Deardorff, who for more than thirty-five years has been manufacturing special made-to-order "still" cameras and lenses as well as being an expert in repairing cameras. A representative of the American Cinematographer had the pleasure of inspecting this new camera at the Deardorff factory. There he watched the process of manufacture, watched the selection of the finest genuine mahogany for the woodwork of the camera, and watched the metal fittings being turned out by the latest improved machinery. It was really a revelation to observe the extreme care with which material was selected and to note the pride of the experts in their work.

The Deardorff is not "just another camera", but is a decided improvement in mechanical design. For example, the 6-inch lens board can be raised to the top of the plate when making shots of skyscrapers or other ultra extreme wide angle work. Also, the front may be lowered to the extreme for photographing objects requiring a down view such as furniture, machinery, etc., and still show a true perspective of the material photographed. The adjustment also permits the camera to be perfectly balanced on the tripod. There is no obstruction to swing when the back of the camera is racked forward over the camera bed. The same applies when using an extreme long focus lens with extended bellows—the back and front extensions being perfectly balanced. When folded the camera is exceptionally compact and very light in weight and yet possesses rigid adjustment and durability. Every professional photographer will appreciate this camera for its ease of operation and efficiency in producing work demanded by modern advertising.

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Of Interest to Amateurs

Filters

A FILTER should not be used for portraiture, but in photographing colors whether in costumes or landscapes, its use is recommended Distant views, especially, are greatly improved in quality by the use of a filter.

Ramstein - Optochrome

SPEAKING of filters, Burleigh Brooks of New York, handles an unusually excellent filter It is the Ramstein-Optochrome Optical Glass Filter These graduated filters are made of two pieces of optically perfect glass fused together, ground and polished like the finest lens No gelatine is used and equal results with a gelatine filter are practically unobtainable They come in complete sets

New Lens Cap

EVERYONE has had the unhappy experience of shooting a beautiful scene — with the lens cap still on However, this misfortune will be eliminated by the new lens-cap introduced by the Bell & Howell Co, which has a tongue which extends into the field of the view-finder and thus can hardly be overlooked. It is made to fit the 1" F:3 5 Universal Focus lens of the Filmo 70 and the 20mm. one of the Filmo 75

Chain Tripod

A VERY handy device for use at times when no tripod is available is being introduced in this country by Spidler and Saupé of Los Angeles It consists of a short length of chain, to one end of which is attached a double-headed block, threaded to fit all sizes of tripod-sockets In use the device is screwed into the socket of the camera, and the trailing end of the chain held under the user s foot By keeping the chain taut, the camera is assured of a brace almost as steady as though a tripod were used Due to its small size and great utility, this device should find a place in the pocket of every cine amateur

Variable-field Viewfinder

THE Bell & Howell Company have recently announced that the unique variable-field viewfinder introduced with their new Filmo 70-D is also available for all other models of the series 70 filmo The finder being a part of the door, all that is necessary is to replace the door of the older cameras with one of the new series

DeVry Orthoplan Filters

ANNOUNCEMENT comes from QRS-DeVry that their new Orthoplan filters are now ready, These are made of optically flat glass with the color being part of the glass itself This it is claimed will remove distortion The filters are made by fusing one white and one yellow piece of optically flat glass together into a solid sheet This is then ground at an angle but with parallel faces in such a manner that the yellow sheet diminishes in thickness and consequently in color until one end of the filter is clear glass

Diffuser for Close-ups

SOFTENING of the light is advisable in making portraits or close-ups when you are using Mazda light The new Halldorson diffuser is claimed to be an excellent diffuser and fits either the Halldorson 1000-watt or 500-watt Mazda lights It may be adjusted as desired

Telephoto for Football

NOW that football season is with us again, many amateurs will secure wonderful results if they use a Telephoto lens at the big games Taylor-Hobson Cooke has a series that should help get that exciting touchdown.

U.S.C. Teaching Photography

THE Physics Department of the University of Southern California has recently announced a course in the elements of photography and cinematography The course will be given under the direction of Dr. A. W Nye, the head of the University's physics department, and will include such subjects as the principles and construction of cameras and lenses, and a grounding in elementary photographic optics The course should be very valuable to all serious cine amateurs as well as those who are preparing themselves for the profession of motion pictures

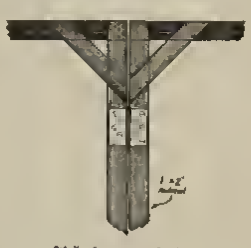
REFLECTORS—HOW MADE AND USED

Practical Advice For Amateurs

By SYRIL DUSENBERY

IN THE early days of the professional motion picture, long before the development of artificial lighting, need was felt for some simple means to direct light on subjects in the shadow. In those pioneer days when sunlight was the sole source of illumination contrasts between objects in the direct sunlight and those in the shadow were so great that the effect on the screen was displeasing. Cameramen experienced great difficulty in determining the correct exposure to give their films If the objects in the sun were correctly exposed, then those in the shade were so hopelessly underexposed that absolutely no detail was discernible. Then some enterprising cinematographer borrowed some white reflectors from an old photograph gallery where they had been in use from the earliest days of the "studio" photography and the problem was solved

Today reflectors are considered indispensable in outdoor professional work No producing company would think of leaving its reflectors behind when it goes out on location. They are not satisfied to use just one or two—they often require fifteen or twenty to properly illuminate the shaded portions of a large outdoor scene. Often a special truck is required merely to transport the reflectors When one stops to think of it, it seems surprising, indeed, that the amateur has been so slow to adopt reflectors when professional cinematographers consider them so essential. Reflectors are so simple to make and improve the photography to such a marked degree that every movie maker should provide himself with at least three or four. The cost of the home-made reflector is so trifling that if one gets cracked or broken from rough handling, it may be discarded without any great loss



Detail of corner construction

The best material to use is fibre wall board, obtainable from any builder's supply house. It is generally obtainable in large sheets of varying surfaces and weights A cheap grade of medium weight fiber board is just the thing A convenient size is three feet by four feet but, of course, they can be made any size to suit the individual requirements of the movie maker. The fiber board should be mounted on a wooden frame so that it will be rigid enough to stand without bending The frame should be carefully constructed with the corners well braced as shown in the sketch It is recommended that one inch by two inch material be used This the movie maker can obtain already planed smooth and if necessary cut to size at any lumber yard Two frames should be hinged together to make a double size reflector They should be so hinged that the reflecting surface of the completed reflector is on the inside when it is closed The fiber board is nailed on to the frame using short nails with large heads In general they should be constructed as light as possible without unduly sacrificing rigidity

There are three surfaces commonly used on reflectors They are popularly termed "soft," "medium," and "hard." These terms refer to the photographic quality of the light reflected One coated with a flat white paint is called a *soft* reflector A glossy white enamel paint is used on a *medium* reflector, while the *hard* reflector is surfaced with tinfoil. This last type surface reflects a very strong, harsh light. Aluminium paint is sometimes used on reflectors but, unless a very good grade of paint is obtained and it is carefully applied, it is very inefficient. At least one reflector of each of these types should be included in the equipment of the serious movie maker.

In making a soft reflector several coats of a good grade of flat white paint should be used An "outside" white lead paint is recommended For the medium reflector, give the fiber board two coats of flat white paint first and then apply the final coat of gloss enamel Be sure that each coat is quite dry before the next is applied There are two popular methods of making the hard tin-foil reflector. One method is to carefully smooth out the tinfoil sheets before glueing them on the fiber board while the other method is to deliberately "crinkle" up the tin-foil before glueing it on The idea being that if the tin-foil is crinkled, the reflected light is broken up and is not as harsh as it might otherwise be. However, at best, it is not easy to glue tin-foil onto wall board smoothly and there are bound to be some wrinkles on the reflecting surface whether they are wanted or not At all events, smooth or wrinkled the tin-foil reflector should be considered as a hard reflector at all times Aluminum foil is also on the market and can be used as a substitute for tin-foil These materials are obtainable at most paint shops as they are used in decorating and sign painting

To get the best results with reflectors, you must train your eye to recognize when they are needed It is not the purpose of reflectors to eliminate the shadows entirely; neither is it necessary or desirable to reflect light into each and every shadow Reflectors should be used only to illuminate those shadows in which there is detail that adds to the interest of the scene. It is misdirected energy to show unessential or uninteresting details. No attempt should be made to illuminate the shaded side of any subject to the full brilliancy of the opposite side. This would give an unnatural effect that is technically termed "cross lighting." Our eye has been accustomed to seeing objects with highlights on one side and shadows on the other. It is the relative value of light and shade that give us the sense of depth—the third dimension It is this effect that aids our eye in judging size and distance. Cross light not only robs us of this sense but gives the subject a weird appearance in addition While it is true that cross lighting is often deliberately used to produce futuristic or modernistic effects, the amateur will do well to avoid it entirely

The best way to test the lighting of a subject is by use of a monochrome filter This is merely a piece of glass blue in the case of ordinary film, of the proper tone so that colors viewed through it have the same relative value as they do on photographic film.

(*Continued on Page* 46)

Reflectors used for lighting subjects in doorways

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Belgium

It is reported that Film Production has lately been developing in Belgium Within three months two Companies have been formed "Lux Films" has built a studio in Brussels, where the production of a talking film has been taken in hand It is not stated what sound system is being used

AGFA-ANSCO CORP. ANNOUNCES NEW AMATEUR CAMERA

THE first of the Agfa-Ansco Corporation's newly-announced 16mm amateur cameras have just made their appearance on the Pacific Coast They are most excellent little instruments, which should reflect great credit upon their makers and prove worthy running-mates for the already popular Agfa reversal films

Simplicity of design and operation are keynotes of the new camera, which is of the familiar box type, and very attractively finished A departure from the usual practice is in mounting the lens on a side rather than the end of box This makes possible the use of a simplified, practically straight-line film feed, making the camera easier and quicker to load It uses, of course, the conventional 1000 ft. daylight-loading spools

The drive is by the usual spring motor, with a high-speed movement in addition to the normal The winding-crank is permanently attached The releasing lever is very conveniently located, and can either be held 'on' or locked in that position. The high-speed device can only be used with the lever locked in the 'on' position, and has no lock, being a good-sized disc, attached to the trigger-shaft, which is pulled out to increase the speed from normal to maximum Thus there is absolutely no chance of accidentally engaging the super-speed gearing, and thus spoiling some important scene

The lens ordinarily supplied is an F 3 5, fixed focus one; but it may instantly be replaced by faster, focusing ones, for advanced users The finder is of the direct, eye-level type, consisting of two lenses, an objective and an ocular, at the ends of the tube extending through the box The ocular or eyepiece is eccentrically mounted, so that it may be rotated to center accurately on very near objects.

It is understood that the same manufacturers will soon announce an amateur projector as a team-mate to their new camrea. Coming when they do these two additions to the famous Ansco line should have widespread popularity among cine amateurs everywhere

AMATEURS

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Capturing Autumn's Tints

(Continued from Page 28)

the Kinemacolor firm It was processed in quite the ordinary way, giving a conventional black-and-white print, which bore only latent color-values, which were revealed by a revolving red and green shutter on the projector. This shutter was made adjustable, so that the correct color values could be obtained with any machine The red gelatine in it was fixed, but the green one was not it was double, having one fixed segment and one moveable one, which partly overlapped By adjusting the amount of this over-lapping in the geen sector, all variations in the coloro of the light source could easily be compensated for All that was necessary was to adjust the shutter so that when the machine ran, empty, at speed, the screen seemed perfectly white Another interesting detail of Kinemacolor practice was that the titles were made only on the green frames, as a safeguard to perfectt color-framing, while there was also an identifying spot printed at the side of each green frame Kinemacolor's results were very beautiful—at best, quite equal to anything now current—but the pictures were troubled with fringing, and also gave rise to considerable eye-strain. As they also required special projection equipment due to the special shutters and the high speed, the process was not long-lived commercially.

Gaumont's Process

About the same time, M. Leon Gaumont, the famous French cinema engineer devised a very excellent system using three color-images, made and projected together through an ingenious triple lens system The three pictures were one above the other, and occupied the same length of film as two normal frames The resultant pictuee was, according to Dr. Mees of the Eastman Laboratories, "—admirable, all colors being perfectly rendered and the quality—in every way first class" However its unfortnnate need for special apparatus limited its commercral usefulness

Eastman's Kodachrome

Clearly, to be truly a commercial success a process would have to be applicable, at least in projection, to all existing machines This points to a subtractive process One of the earliest of these, and a typical one, is Eastman's "Kodachrome," which was developed by J. G Capstaff This, again referring to Dr Mees' monograph on the subject, was taken with a special camera which made two successive pictures—the eed and green images—one below the other This was printed through a special projection-printer, on a special stock, which had a sensitive emulsion on either side; the two images were printed exactly opposite each other, and in perfect register The two sides of the film were dyed appropriately—one red the other, green—and the film was ready to run Being in itself a complete color-record, it could be used in any standard projector, with no special adjustment at all The "Kodachrome" process is quite successful though it has not been so extensively exploited as some others, and it is still in use today

Prizma

The next to capture the spotlight was "Prizma" a beautiful process which enjoyed a most checkered career, finally failing through no fault of its own Prizma began life in 1917, as a pure four-color additive process, using red-orange blue-green, yellow, and blue-violet It gave beautiful results, but was hardly more than a laboratory experiment yet The next development was in reducing it to a simple two-color process, and eliminating the filters by putting them on the film this was done by dyeing the alternate frames their appropriate color In this form it began to show signs of being a commercial product Finally it blossomed into real practicability by being adapted to give a subtractive print, very much after the fashion of Kodachrome For several years after this development, which occurred about 1921 Prizma flourished as the proverbial green bay-tree Many of the major producers used it for special scenes and inserts while several features were made entirely in Prizma Mae Murray and her producers were Prizma enthusiasts, while D. W Griffith Hugo Ballin and the Famous-Players Company also made use of it Abroad, an English company made at least two features in Prizma under the direction of Commodore Blackton All in all, Prizma seemed headed straight for success in a big way Just at that time, however, the film industry was beginning its last great migration to the Pacific Coast Prizma did not choose to run so it stayed and languished in its inaccessible laboratory in Jersey City Had it

(Continued on Page 45)

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PROFESSIONAL AMATEURS

Fred Niblo Gets His Fun With an Eyemo

By WILLIAM STULL, *A. S. C.*

Fred Niblo vacationing in the Grand Canyon with his Eyemo—Picture made by Mrs. Niblo (Enid Bennett)

WITH the development of the motion picture industry there has arisen an entirely new class of photographic amateur. Formerly, one was either an amateur or a professional. The division was sharply defined, and there was no middle ground. But today, the motion picture has brought forth a new being—the professional amateur, men and women whose lives are spent in the production of cinematic entertainment for the world but who also find in amateur cinematography the same absorbing interest that other amateurs do.

A list of even a few of these people would be a veritable "Who's Who of Filmdom." Great stars, famous directors: brilliant executives, skilled cinematographers—members of every class of the screen world—all have felt the lure of individual picture-making, and answered its siren call. Yet, even as the appeal is different among individual laymen, so, too, it is different to these professionals. Each famous personality has been attracted by some different side of the sport; some use their cameras to make pictorial records of their family lives, others, to record their sports and travels, while still others experiment—ceaselessly seeking new and better ways of expressing their thoughts in photographic motion. In fact, they differ among themselves just as all other amateurs do, for they are closely akin to the rest of the world's cinematic amateurs save that to them cinematography is, directly or indirectly, a vocation as well as an avocation.

Outstanding among these photographic amateurs of the screen both for his personal distinction and for the length of his interest in the hobby, is Fred Niblo. He is one of the few 'men beside the camera' who needs no introduction to the world at large. One of the few directors whose name carries weight with that erratic deity, the box-office; perhaps the most consistent producer of great pictures in the business, the whole world knows and respects Fred Niblo as an artist and as a man. Hollywood knows him as a fine and sympathetic fellow-worker, and as the proud father of a happy family. And a very few know him as an enthusiastic amateur photographer of many years' standing.

For Fred Niblo's interest in photography is older than the motion picture itself. It goes back to the days of the first Kodaks—those days when an interest in photography meant far more than the idle button-snapping that so frequently passes for it today. In those early days an amateur photographer had to be a truly skilled photographic craftsman, knowing his photography from plate to print. Kodak finishers didn't exist, and ready-mixed chemicals were unknown. The amateur had to mix his own chemicals, develop his plates, and make his prints himself. Sometimes, indeed, he had to make his own printing-papers as well. This was quite a task for the fortunate ones who were settled enough to have some sort of a fixed dark-room, but for travelers it made devotion to photography a real devotion indeed. And, like most young actors, Fred Niblo was doing a great deal of traveling.

Scenes as photographed by Niblo on week ends as he shoots his daughter with his Eyemo

But he kept on taking pictures wherever he went, developing his negatives where he could—in hotel rooms, boarding houses, any place at all, making his prints the same way, sandwiching the work in between rehearsal and matinee and between matinee and evening performance. In spite of the difficulty, it was a fascinating field for an amateur cameraist, for there were new subjects to be found everywhere, new places, new events, new people—new experiences every-

where, to be lived to the full, and shared with the ever-present camera It can hardly be expected that he was the only young actor who was grasping these opportunities but—his pictures were different They were not all of them the random snapshots of the ordinary young man with a camera, even in those early days Fred Niblo had that instinctive gift for telling stories with a camera that has since been revealed on the screens of the world His pictures even then had that same ability to arrest interest and to satisfy the eye that they have today; editors here and abroad saw and liked them, bought them, and printed them in their magazines Soon, the pictures were augmented by short articles, then by longer ones—and the young actor found himself a successful writer as well

Then a series of European engagements brought him new opportunities as an actor, writer, and photographer Finally, while he was in London came a starring contract which took him to South Africa, which was then an even less-photographed part of the globe than it is today. Small wonder, then that once the contract was fulfilled, he should be seized with the wanderlust and decide to see more of the dark continent.

It was during the course of these wanderings that he began the making of motion pictures In Nairobi he met a man, traveling much as he was, making motion pictures for some missionary society in England But what subjects he chose! 'Tame natives in their made-in-Manchester 'Mother-Hubbards' and cotton pants; mission converts being taught the White Man's ways, or trooping meekly into church singing hymns' Yet all around surged the vibrant mystery of untamed, equatorial Africa' Scenes and things of which the world knew nothing, places which had never been photographed, virgin Africa into which a movie camera had never penetrated' No man of Niblo s spirit and experience could willingly allow such a glorious opportunity to go to waste, and he then and there struck up a partnership with the crank-turner—and began to learn the cine cameracraft, and to make the sort of pictures he knew the world wanted

In those days cinematography was a task in any clime—but in the tropics it was next to impossible; Even today, tropical cinematography abounds with difficulties, but in 1907, when the movie was so young and new, the problems which beset these two adventurous souls who first dared face tropical Africa with a movie outfit were beyond all imagination

The precarious film supply, the unknown working conditions; the myriad unnamed insects which sought food and shelter in the wood and leather work of the camera, these were sore trials, but the real heartbreaker was the climate Heat, blistering down all day long until it softened the very film in the cameras, and melted away the ambition of the cameramen, was bad enough during the daytimes but it was cruelest at night, when, in their little improvised laboratory they would try to develop the day's takes For, once it was out of its protecting tins, the film had to be exposed and developed at once, before the hot, moist atmosphere spoilt it utterly But in such a climate development is a colossal problem Developing solutions must be at least reasonably cool, or the film will frill, soften, and part company with its celluloid base Modern expeditions, with their portable lighting-plants and ice-machines have almost overcome these troubles, but Niblo had nothing so luxurious with which to work. Instead, he was forced to develop his films by night, in a tent a stuffy iron house, or any other place he could find, and to hang his precious films on trees and bushes to dry; In spite of all sorts of chemical hardeners mixed in with his solutions, the film persisted in softening. Clearly, something had to be done or the trip would be a failure Finally Niblo made a set of developing tanks which solved the problem They were nested into larger ones into which the coldest available water was constantly poured This system worked beautifully as long as the water supply was fairly cool, but when it wasn't—and it often wasn't—the heartbreaks continued Many a time indeed they hung their film up at night, only to waken in the morning and find the emulsion neatly piled on the floor, with the bare celluloid hanging innocently above—and no retakes possible!

In time however after traveling the length and breadth of Africa, Niblo found himself with enough film and stills to make up a lecture program which was profoundly interesting to a world already agog with President Roosevelt's impending African trip He toured the country very successfully with this for some time, and then returned to travel, finding new material wherever he went Europe, Scandinavia, Russia, all furnished him with film and photos He lectured during the winters, and ranged the world over in the summers It was a pleasant life, and profitable That is, it would have been profitable had his summer wanderings been a little less extensive. As it was, each summer's travel ate up the winters' earnings, so, reluctantly, he returned to the stage.

From there, it was no great step to joining his friend Tom Ince in pictures Once there, his past experience made it inevitable that he should become a master of the new medium His own interest in cameras and camerawork have made him known among

The Niblo garden becomes an amateur studio on Sundays Here are the great Doris with his beautiful wife Enid Bennett and her

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HOLLY 1944

cameramen as one of the finest directors to work with As one man who has photographed many of his recent pictures said 'You can't put it too strongly; Fred Niblo is the finest man in the world to work with. He's a fine man, and—he knows what it's all about He understands my problems as well as his own, and never asks me the unreasonable things some directors do ' Small wonder, indeed that Niblo pictures are always so beautifully photographed'

But Fred Niblo's interest in photography is in no way a thing of the past for he is still as much the enthusiastic amateur photographer as ever In his home is a fully-equipped projection-room and in it he frequently shows his friends Fred Niblo productions the world is not privileged to see' intimate records of his home his friends, and his charming family, directed and photographed by himself.

Just this last summer he managed to slip away from the studio for a two months' vacation, where he and Mrs. Niblo —the beautiful Enid Bennett—spent with car and camera, motoring through the beauty spots of the West from Lake Louise to the Grand Canyon Aside from the personal record of the tour, they brought back a considerable quantity of film and stills for the studio's location library Modestly, however, he makes light of this "It was just incidental to my private films of the trip," he says. "I carried my Eyemo and my Reflex along principally for the pleasure of making the pictures Of course, I only go at it in an amateur way—but I get no end of pleasure out of it Still, it has its drawbacks too Carrying two big cameras like those up a few mountains is quite a job! After my second mountain I got myself one of those little 'still-film' cameras After that, it was easier! And I was surprised with the results I got from the little thing— beautiful little pictures, that enlarge surprisingly well. Here are some of them"

And he exhibited a packet of the tiny prints with the same enjoyment evidenced by any enthusiastic amateur. One glance at them showed what class of amateur he belonged to, for the prints were technically fine, and, one and all, beautiful examples of artistic composition Whether they were of the majestic Rockies the desert, the sea, or of his wife and chance-met companions of the road all breathed that spirit of beauty with which he infuses his screen work Every one was proof that his photographic ability did not emanate from the publicity department but from the sincere interest of the man himself

Next summer he plans another photographic vacation this time a trip through China from which, with undiminished enthusiasm and augmented camera equipment, he will bring back more pictures, and, perhaps an article for the AMERICAN CINEMATOGRAPHER

An Expedition

(Continued from Page 16)

enough a small island could be seen.

Upon looking closely I discerned a number of small canoes making toward us In all my travels through the Pacific Islands I have never seen canoes quite like these. They were the shape of a figure 8 with the paddler sitting in the middle and revolving the loop part of the '8" with his feet They made tremendous speed and soon came alongside the ship and came aboard To my great surprise they all had blonde hair and greeted Horace in their native tongue which has a sort of a musical note something like a Jews-harp They looked at me curiously and asked Horace several questions, making signs in my direction Horace seemed to swell up with pride and ordered some of the crew to get my cameras on deck I asked Horace what it all meant but he refused to answer. My cameras were loaded into the canoes and I was ordered overside and firmly tied to one of their queer boats

After much grunting on the part of the paddlers we landed on the island and I was taken to a long row of grass and mud huts Horace presently appeared and with him was a tall native with blonde hair the same as the rest except his was more fuzzy. He looked me over very carefully and then talked at great length with Horace Finally Horace turned to me and said "His Greatness wisbes you to make a closeup of him " I agreed to make it and was freed of the grass rope that bound me

I set up my camera and told Horace I was ready His Greatness took a position in front of the camera but as the light was not right at this angle I moved the camera so that I was shooting straight backlight which any Cinematographer will agree is the standard rule for blonde hair His Greatness became fearfully angry and produced a book which he had Horace show me and in which it stated that light should come over the right shoulder of the one at the camera I explained to Horace that all Cinematographers had made a fast rule that no blondes were to be shot except with back light Believing I was right in this I steadily stuck to my principles and daily refused to shoot His Greatness except in back light.

I secretly wrote a letter and "borrowed" the catcher's mask of the island ball team in which to conceal it At the first opportunity I heaved this into the sea with the hope that it would drift out with the ebb tide and be picked up by someone bound for the outside world

However a tidal wave bit the place and carried the message right into the bands of His Greatness He was very angry and was about to have me burned at the stake. I saved the day by back-lighting him He was so happy he hailed a passing ship and sent me home.

Germany

It is reported that a new disc system sound producing equipment is to be brought on the market. It is to be constructed according to the Lignose-Brousing System and to use T.D K amplifiers

Your Makeup Problems

By MAX FACTOR
[*Internationally Known Authority on Makeup*]

BEGINNING *next month, under the above caption, Max Factor, internationally known authority on make up for stage, screen, home and street, will conduct a department on make-up in the* AMERICAN CINEMATOGRAPHER. *Mr. Factor will answer all questions regarding any makeup problems for all readers. This magazine feels particularly fortunate in securing this service from a man whose genius has made of makeup an art, and whose color harmony cosmetic suggestions have been endorsed by stage and screen players and thousands of women throughout the world. Below is a brief article of unusual interest to women which Mr. Factor has prepared for this month. Remember, anything you want to know about cosmetics will be told you by Mr. Factor if you address him care of this magazine.* —THE EDITOR

What Makeup You Need

By MAX FACTOR

THERE was a time not so many years ago, when it was considered a terrible error for a woman to use makeup. It was supposed to be used on the stage. But as for street wear—well, it wasn't done.

However, as the world has progressed, women have progressed also, and today a woman has the right to use all the makeup her heart desires. As a matter of fact, to see a woman on the street without makeup today is a rarity. Cosmetics have become a great factor in life—and will so remain.

Many women, sad to relate, have not had the proper instruction in the use of cosmetics, with the result that some of them are using the wrong shades of rouge or powder and the result is an unhappy one. In our organization we have perfected eight different shades of powder and seven in rouge. This, we feel, gives every woman the opportunity to have individuality in her make-up, as well as to have makeup that will harmonize most perfectly with her complexion. Through our experience with world-famous screen stars we have discovered the outstanding type in each class making it easy for any woman to find out in which class she belongs and achieve startling results which will increase a hundred fold the magnetism of her personality.

Jeanette Loff is an outstanding example of the yellow-haired girl with blue eyes and fair skin. Such a type should use face powder of the flesh color. Her color in rouge is Blondeen and the lipstick is one we describe as light. For evening wear to fit this type we have created a powder with a slight lavender cast. With this powder the rouge should be much brighter and the lipstick more vivid in color. The reason is that artificial light absorbs make-up and ordinary daytime makeup would fade and the blonde appear washed out.

Betty Compson we will cast as the *Medium Blonde* type. Her eyes are blue but her skin is creamy rather than fair. She should use powder such as the Rachelle. Her rouge and lipstick should be the same as Jeanette Loff.

Makeup for the eyes include three essentials. Eye shadow which is added to the upper lid to give the eyes greater expressiveness; masque to make the eye-lashes heavier and longer and the Dermatograph pencil to give the eyebrows a more pronounced shape, to bring out their color and to give them a soft sheen. The *Betty Compson* type of girl, in the daytime should shadow her eyes with gray eye shadow but for evening she should use a blue eye

(*Continued on Page 47*)

ONE YEAR AGO

Panchromatic Make-up was but a new idea. Its purpose was clear, but it needed the element of time to thoroughly test its merits.

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MAX FACTOR'S PANCHROMATIC MAKE-UP is used in all the large Studios of America and Great Britain. Its fame has spread to every corner of the world.

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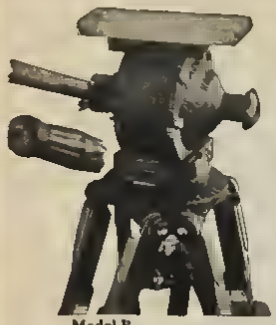

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David Wark Griffith

(*Continued from Page 6*)

To Griffith and Billy Bitzer also are due the first successful long shots These came in "The Birth of a Nation" and 'Intolerance" In "Ramona" the attempt had been made with little or no success. The figures, as the cynics had predicted, did not look like human beings but rather like ants Imagination on the part of attendants in picture shows had to work overtime But in the other two pictures success crowned the efforts of the experimenters Nothing more striking ever has been shot than the ride of the Klan that is almost like the motif of an opera, in the telling of the story of "The Clansman," or, to give it is picture name, "The Birth of a Nation."

That there is "nothing new under the sun" becomes almost axiomatic in telling the Griffith saga Color photography and soft-focus pictures both were used by him long before the great cry of today of art with a captialized "A" It makes one think of the crediting our continental rivals with "camera-angles" first extolled as revolutionary in "Variety," done in Germany with Jannings, Warwick and De Putti It transpired our own directors and cameramen had anticipated those self-same camera-angles years before although no one then had seen fit to enthuse the innovations not bearing a European trade-mark. It seems to me the Bible has some such maxim or aphorism to the effect that "A prophet is not without honor save in his own country." And how completely applicable to the motion picture industry!

The soft focus picture came in with that masterpiece, "Broken Blossoms," that pathetic, wistful tale of the East End of London It is one of the finest things Richard Barthelmess has ever done in a career filled with fine characterizations It is possibly Griffith's second favorite picture Certainly he got more fun out of doing it than any other bearing his name. It only took three weeks to do because, as Griffith himself says, "it was made for a picture lending itself as few stories do perfectly to picture treatment"

Griffith rightly believes we have the best cameramen in the world 'That bars no nation, Germany included," declares Griffith. "There is no valid reason, either, why the intelligent cameraman cannot always become an outstanding director. Victor Fleming and his assistant, Karl Brown, who did that most admirable Tennessee mountain story, 'Stark Love,' proves that" Before leaving the subject of innovations due to the Griffith era, miniatures must be included "Intolerance" used many of them for the first time The sets were massive and often shot with the regular cameras but these shots were supplemented with many miniatures and even the skilled photographer would be at a loss to tell which were which in the completed, released picture And, remember this was fifteen years ago that these things were being discovered and used

He does not believe that acting has improved so remarkably with the passing of the years "There were bad actors then and there are bad actors today," says Griffith 'Possibly then there was more so-called old-fashioned acting than today, more ranting and over-emphasizing the playing of parts But we have no actor today comparable to men like the late James Hearn of 'Shore Acres' fame"

The combination of various big producing companies, constantly recurring in recent years, Griffith believes in "Why not?" he argues 'It is the same thing that is taking place in other commercial undertakings. Mergers should reduce the cost of production and distribution and increase the quality offered to movie-goers everywhere"

"Sound has come to stay" declares Griffith He is an ardent admirer of and supporter of the silent drama being made oracular "People seemingly want it," he adds, "and the business of producers is to give the people what they want and will pay for. I doubt if the screen will ever swing back to the silent picture, although there will always be productions of the latter made at the same time that the talking and singing versions are made People once having heard characters on the screen talk and sing will not be content to go away from the theatre having been given silent figures Naturally there is a great deal of room for marked improvement an improvement each week sees being achieved"

People today think the theme song of the talkies is new. "As a matter of fact" says Griffith, "it was done ten years ago in 'Dream Street' Ralph Graves was supposed to sing it but didn't. Then as now they used another person for the singing when the actor's voice did not register properly In that same picture Porter Strong, who played the role of a negro spoke a few lines The audiences seemed to like the innovation but the producers did not."

Those Funny Boys

(*Continued from Page 5*)

is because after photographing them all day I can't resist going into a theatre and watching them on the screen at night."

And if you'll pardon the personal view of the writer, I think that is the greatest compliment any actor could receive.

A pompous, self-satisfied, dumb and innocent person on the screen, Hardy is the exact opposite in real life He is the very essence of geniality and modesty and is really of the intelligentzia. Laurel, witless vagabond of the screen, is a quiet, shy and retiring English gentleman in reality. So shy that he slips into previews after the lights have been lowered, and ducks out before they come on again.

But, they are two practical jokers. Powers, the cameraman, tells a good one on them, or rather on himself. It seems that the pair had decided that Powers was to have a ducking in a pond where they were working on location. They had set the day when Powers was to be pushed into the water, and had all plans carefully laid.

However, Powers prepared to fool them So, he donned a bathing suit on this particular morning, and slipped some old clothes over it Then he went to work All day he placed himself in positions where he would be at their mercy and easily shoved into the pond. Then he planned to slip off his clothes and emerge in the bathing suit Night came and he was never pushed. He is still wondering how these jokers discovered his secret

They are both philosophers, more or less, and refuse to take either themselves or life too seriously They enjoy their work, have as much fun as do the people who see their pictures.

"Life is serious enough, anyway," says Hardy, 'so why do a lot of worrying Just take things as they come."

"He's right." added Laurel, 'too many people believe that the world rests on their shoulders A comedian should remember just one thing That is 'Laugh and the box office is always busy'."

So the talking phase was abandoned Again, too far in advance of the times.

Today the great search seems to be for the perfect color picture. Yet Griffith used Technicolor in "Way Down East" years ago. "Color "says Griffith,' never will become the accepted photographic medium because people tire of too much color in pictures Inserts or short subjects, yes, but not entire long reel pictures Then, too, there must be greater discoveries made to secure real colors. We have now only imitations of natural colors and not the real thing. It will have to be a highly sensitized film which will bring the desired result."

The constant experiments with the third dimension will go on, he predicts "Some day they may achieve what they seek Yet proper lighting today will often successfully create the sought-for bas relief effect"

Griffith has had his fling at the third dimension, too Using two lenses on a wider than ordinary film will give the result sought. That I know because at the Cameo theatre in New York two years ago I saw special demonstrations of the feasibility of this. Whether the public demands it is a moot question and Griffith himself has lost or gambled at least one hundred and fifty thousand dollars seeking for the secret so he can be regarded as an authority on the subject. He realizes the value of such pictures for big effects but whether universally feasible for an entire picture he frankly does not know. It is like the subject of larger projection screens making bigger, life-size figures appear on the screen It is really in the experimental laboratory stage.

Griffith feels that when he hit on the plan of reversing the old idea of a light over the subject's shoulder he secured what is tantamount to the third dimension effect. This is what is so successfully used by all directors and cameramen today.

Experiences galore filled with danger and with humor abound in the career of this gray-haired, keen-eyed Nestor of the motion picture world And he, like most really big men, does not take himself seriously He credits much of what success and fame he has achieved to his cameramen 'Without their perfect co-operation in carrying out my ideas and advancing their own often feasible and valuable suggestions I feel I would, indeed have been lost and gotten nowhere" says Griffith 'The American cameramen are the greatest in the world They are loyal, indefatigable workers, are brimming with enthusiasm, are fired by a spirit of artistic fervor, and are masters of lighting—in short, without them I would have never reached first-base They are real artists and gentlemen—my friends"

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Better Movies

WHILE camera makers have brought 16mm cameras to the point where there is little to do except press a button, there still remains the problem of exposure. Over-confidence on the part of many an amateur has ruined a good picture. Some people can judge exposures, but at best, it is usually "guessing" Those who want accuracy will do well to secure a Cinophot or Dremophot exposure meter and be correct. They are small and for good results are as indespensible as a fly to a trout fisherman.

Australia

The Australian Broadcasting Company has announced that it expects shortly to commence broadcasting of pictures from Station 2 F C in Sydney and Station 3 L O in Melbourne by the Fultograph process The system to be used will be the same as that adopted by the British Broadcasting Corporation for the daily transmission of pictures from 2 L O London.

England

Will Day's wonderful collection of cinematographer apparatus in London, is to be sold by auction Many of the items of this collection, which has taken Mr Day 30 years to amass are now almost priceless It includes for instance, the very first film ever shot, and a number of specimens that cannot be duplicated in the world The date of the auction has not yet been fixed It is expected, now that it is known the collection is to be sold, that it will be bought by a private bidder. It is an absolutely unique record of the search for motion pictures and the earliest piece is a box of Chinese figures used for shadow shows in the early centuries of the Christian Era The world has been searched for any and every object having any relation to the development of motion pictures from the earliest conception of the idea.

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Metropolitan's Sound

(*Continued from Page 7*)

Physically Metropolitan's sound plant rivals favorably any of the studios of the larger individual producing organizations At present two sound stages of average size, (106-76), two smaller ones and a newly constructed stage 200-100 for bigger and more elaborate production Not the least important factor perhaps to the independent is the additional portable equipment, large trucks containing complete recording equipment in themselves which go anywhere that a car can go. Sono-Art took advantage of this by making some of the first big street scenes in a town situated quite a distance from Los Angeles, Christie only recently was producing a Buster West picture by use of portables partly at the old Christie studios, partly in "New York' streets at Metropolitan and partly at Fort McArthur near San Pedro

Another unique outdoor enterprise is under way by Robert C Bruce, well known producer and camera artist of outdoor pictures Mr. Bruce is now in the Yosemite Valley in a deserted mining camp town making a series of Outdoor Talking Sketches for Paramount The use of the portables has of course made possible the broadening out and making of pictures more in the style of 'movies' than of talkies which just talk and do not cover ground One of Christie's recent productions "Faro Nell or In Old California," for instance was filmed on the desert north of Palmdale with the broad expanse of country and typical bands of cowboys riding and singing their way across the open land

In production for the independent companies at Metropolitan man power is of course a chief item There are 32 men, all college or practically trained in this new field, in the recording crew headed by R S Clayton who came from Electric Research Products and who formerly was in the radio division for the U S Navy He was in charge of the installation at Paramount, M-G-M and Metropolitan, and of course was familiar with these installations in every foot of the miles of cables and connections as well as handling theatre installations His assistant, A M. Granich, comes from 11 years with the Bell Telephone laboratories

The system of operation of a leasing studio for independents, aside from the recording job, differs not at all from the way it was handled when silent pictures were made. Metropolitan for instance maintains many departments which furnish their services to the individual producer as required —camera department, music, cutting, projection, property, estimating costume electrical, and construction As in other studios the camera departments are manned by men who were in the motion picture business before talkies came in The cameramen were among the first to study the new equipment and learn how it affected their modes of working

With these forces at work combining with the staff of the individual producers, noteworthy all talking productions are being made Especially outstanding are said to be the James Cruze production 'The Great Gabbo' which is not only a big picture from the production standpoint but which will introduce some entirely new angles in recording tricks and use of sound; and the first Harold Lloyd all talking picture 'Welcome Danger" which is now in the final stages, and which will no doubt bring Lloyd always a standby and a leader, into the forefront of the talking ranks.

The entire setup has made it possible for any independent producer to compete on an even footing with the larger producing companies which were to an extent ahead of them in the field with their equipment and sound studios, and without the tremendous investment which any one of them would be forced to undertake to go it alone in sound

Agfa-Ansco Corp. Opens Los Angeles Branch

THE Agfa-Ansco Corporation has lately taken over the photo-supply business of Roland J Giroux of 223 W 3rd St Los Angeles, Calif which they will continue as a direct factory branch for the sales and service of their extensive line Of particular interest to Cinema amateurs is their establishment of a completely-equipped laboratory for the processing of their reversal film. in which they offer the movie-maker the same one day service he is accustomed to enjoy with his still photographs

Elephant Hunt

(*Continued from Page 23*)

through two villages and from there through the regular jungle —curting our way as usual Nothing of importance happened so went into camp around noon Sent out scouts looking for fresh trails They returned late and reported tracks three or four days old headed north.

FEBRUARY 20TH

Broke camp around 8 a m after a council of war last night. returned to base camp on the river sent into town for more food supplies and will rest in this camp for two days. then head north towards Chieng-Sen where we have received report that many elephants are located

FEBRUARY 21ST

Still in base camp Nothing much happened today except a little excitement of having a couple of the hunting elephants getting into a fight and one of them being punctured in twenty-three places with the other fellow's long tusks They brought him to me to be doctored Some of rhe wounds were from one to three inches deep so I pur in a lot of permaginate of potash which seemed to cure rhem up without any infections

FEBRUARY 22ND

Sent a runner to town to send me some bullock carts in order to move into town They arrived here around noon and got settled in town again Met Prince Svasti and he invited me for a motor ride with the Governor and himself. Rode out to where we are to establish the new base camp and back for dinner My two boys had a real dinner prepared with canned tomato soup fried chicken plenty of biscuits, erc . and when about finished eating the Princess sent over a large dish of sliced tomatoes and other good eats and were just finishing that when another large rray piled high with foods came in from the Governor who has been very nice and who carries a very nice name—*Phraya Rajadej-Dumrong* He sent hot biscuits, currie and chicken and several Siamese dishes I can t begin to describe For the first time in many days, I think, I have all rhe wrinkles out of the old stomach Our few remaining cans of beef and beans with a little rice weren t very filling

FEBRUARY 23RD

Left Chieng-rai around 10 30 a m moving to *Quay-Mai-Kautoom* a village near the French and Burmese frontier. Prince Svasn came out in the afternoon Nothing of importance going on only the preparations for the continued hunt

FEBRUARY 24TH

Left the camp at 7 30 going south on the main road until we met the hunters on foot then turned in southeasterly direction Picked up a hot trail in about an hour Followed that until 3 p m when we went into camp and sent out scouts They returned about 5 p m stating they saw the herd About 7 p m one of the "houts" was out raking a bath when a wild elephant came over to investigate the splashing The hout looked up and just above him was this large elephant looking down on him. He lost no time returning to camp. About thar same time one of my boys and myself started from the camp with a rifle and knife and they reported plenty of wild pets around We ran into the hout who was all excited and our of breath and told us where he last saw the elephant We went looking for him but he had disappeared in the meantime so we continued wandering around for an hour or so and returned to camp around 9 p m and had dinner Soon after that we heard wild elephants trumpeting on the opposite side of the camp and so one of my boys and one of the houts took a rifle and a couple of knives and a flashlight and went out to see what they could see They found my big Jumbo feeding near by and proceeded on beyond him Not very much farther they ran into a large female who charged at them as soon as they turned the flash light on her They in turn hurried back to the protection of old Jumbo who is quite a big boy to play with and with tusks about a yard long They soon returned ro camp having had all the adventure they wanted for the evening On leaving the village that day the boys failed to put my travel bag on in which I usually carry everything from soup to nuts so tonight and tomorrow I can go without toothbrush towel soap and everything else and only a can of beef and a can of beans to eat for the next two days Can send back tomorrow though so it could be a lot worse

FEBRUARY 25TH

Leaving everything in camp we drove forth ro multilate the jungles Of all the tough places we had been through today s was the worst From 7 a m until around ten when we struck the herd. we had ro cut every foot of rhe way and you can imagine me perched up on this mountain of flesh sitting on the camera srand which put me about fifteen feet in the air trying to pro-

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tect the camera the best way I could The other hunting elephants carried nothing but the two houts. one on the neck and the other standing (part of the time lying flat) on his back with the ropes coiled on both sides of his back They were able to lie down and slide through places that I couldn't Of course they had to do some cutting but only enough to get through and that didn t help me much, so I was plenty busy and I don't think I ever was scratched so much and in so many places in such a short time in my life before We had been traveling slowly up until about 9–30 when we came out of the jungle into a clear space of thorn fern which is what we call rattan Across this space we sighted a small herd of young elephants ranging about six to seven feet high Just as soon as they saw us they started for the jungles again and we behind them My old "iron sides" went on the warpath as soon as we sighted the wild ones which is very often the case when the trained ones get the scent of a wild herd They start growing wild themselves So we had to hold him back with the *bull hook* and use it plenty hard when we started into the jungle again after the wild herd. I never thought it possible for such a large hulk of flesh to move so fast and felt we were going to h— fast through bamboo, thorn brush and low hanging limbs and vines as big as your arm Using the hull hooks and knives as fast as we could, slashing and cutting and pounding until we could quiet him down We los the herd, of course, owing to having to cut our way through such dense jungle but our lead hunter stuck to them and caught one of them You should have seen the houts on the elephants that caught the wild one When they sight the herd, according to their ceremony, they have to take off their clothes to their waist and you can imagine the condition of their bodies when they finished, when I was scratched from head to foot wearing heavy riding pants, boots and woolen shirt I had my sleeves rolled up and the blood was dripping from my elhows and chin. We were a fine looking mess when we finally came up to where they had made the catch.

The wild elephant, once he is caught, is more or less of a disappointment—especially when they are putting the big rope around his neck and having the other rope on his rear leg The two hunting hulls approach him, one from either side, head on to his sides, each with tusks about a yard long. If the wild one attempts to make a move the hunting bulls drive their tusks into his sides and he usually knows that so stands very still while they are putting this rope on his neck, and doesn't play any tricks.

I didn't shoot or turn a crank on any of this because as soon as they sighted us and started into the jungle it was so thick there was no light to shoot. I was beginning to feel rather discouraged about it and felt we were just going to get a continuous hunch of rides through the jungles and cut up and no film to show for it and realized that if we could not get them out in the open country I would have no chance at all in shooting anything at all. We went into a conference about it that night in camp and the hunters realized the situation and decided they would go out and comb the jungles and try to drive them out into the open country so I could get a shot at them.

FEBRUARY 26TH

The hunting elephants returned to the jungles and I stayed pnt all day in camp resting. Nothing of interest happened.

FEBRUARY 27TH

Remained in camp Louis came out for a short time in the morning Prince Svasti in the afternoon Talked things over a long time and late afternoon went hunting but, as usual, saw nothing wild and returned to camp.

FEBRUARY 28TH

Left camp early with my four pack elephants and started west into the jungles trying to pick up fresh trails. Found some old ones but nothing worth getting excited about

MARCH 1ST

Nothing of importance happened Went out in the afternoon looking for a good location for some skyline shots but all the jungles too thick, so back to camp

MARCH 2ND

Louis came out and brought one of the ladies from town who prepared a real Siamese dinner for me which tasted mighty good They sat here until late afternoon and the Kruba was sent back into town on his elephant to he put into the hospital as he was full of fever and all in

MARCH 3RD

Left base camp early in the morning returning to the jungles to round up some of the hunters that had been separated Cut in as far as our last old camp and stayed there over night Nothing of importance happened Just the usual cutting and hacking at vines, etc., to get through.

MARCH 4TH

Sent out scouts to try and pick up the trail of missing hunters They returned around noon had lunch and started out in the afternoon trailing and following their trail, headed southeast and travelled through some terrible country full of bamboo and rattan and had cut every foot of the way making about 15 to 18 kilometers a day Finally came out into the Meh Khang River and turned south until night—still on the trail Camped on the river all night

MARCH 5TH

Hit the trail early Still going south Around eleven o'clock we turned southwest, crossed a small mountain range and dropped

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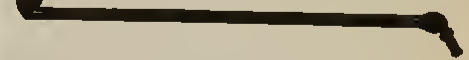

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down into a valley There we found a small village where there was quite a commotion going on We headed into the village and found the missing hunters there and also the elephant that we had lost (which was one of the hunting elephants called Seedaw) Seeing the condition he was in the hunters decided it would be foolish to try and take him along at that time so it was decided to camp there over night with the hopes that he would be in better condition in the morning They put out the other hunting elephants to feed for the night feeling quite sure that the Seedaw elephant would stick around them for the night

When an elephant goes mad it is quite noticeable on his head for just above his eyes are small oil holes which begin to ooze oil very slowly, then increasing until there is a regular stream which finally turns blood red At that time he is thoroughly on the war path and very dangerous to try to play with always ready to kill At times they will kill even when they are just beginning to ooze oil

MARCH 6TH

The hunters were up and alive early in the morning bringing in the hunting elephants but the Seedaw elephant refused to be coaxed into camp After some very heavy consultations they thought it might be possible to get him if they took all the hunting elephants back into the jungles where the Seedaw elephant was so that his manhout would be able to mount him for usually, once a mahout gets on their necks he is able to handle the elephant So we all started out with all the elephants and mahouts but the mahouts for the Seedaw elephant were so badly bruised and scratched from brush, etc, that they could not mount him at all Then the mahout that originally caught and trained him decided he could handle him so when we were close enough to see him plainly we could still see the oil oozing from his head and some of the mahouts advised against trying to take him but the old mahout was more or less determined to take him so here we go First we surrounded him with the big hunters and the mahout starts over toward him and old Seedaw switching heads for tails and continually milling around until he caught sight of his old mahout coming towards him when he seemed to quiet down The mahout walked up to him without any sign of trouble from old Seedaw and attempted to mount when without any warning whatever the big brute took the mahout in his trunk and threw him several yards through the brush turned and tore away through the jungles We picked up the mahout who was badly shaken up but not seriously hurt and returned to camp and stopped over night

When this old Seedaw elephant first went wild we were in a terribly thick jungle of needle trees Needle trees are rattan which is found in the jungles of Northeastern Siam and grows like a very thick brush fern The body of the plant is around one to one and a half inches thick but is too long to support its own body and instead of the entire vine standing upright, it is coiled and matted around on the ground and the entire outer coating of the stalk or vine is long thick and very heavy needles that actually cut like a knife and the center ridge of the long, lacey fern leaves is a solid mass of thorns and from the end of the beautiful looking (but not feeling) fern-like leaf is a long streamer yards long with nothing on but thorns that add their cuts along with the rest This stuff is much harder to cut through than the bamboo.

As we sighted the wild herd they turned and went into this bunch of needle trees through this and up a small mountain range When the hunting elephants strike a herd they usually go like the devil is after them and what with cutting needle trees, hanging vines low hanging tree limbs bamboo with one hand and hanging on to your camera with the other and your elephant going half wild it is very hard to watch everything at the same time and make the necessary turns In this mad rush several of the mahouts were knocked and dragged off the backs of the elephants

I have spoken before about one mahout riding the neck of the elephant and the other standing or squatting on its back The fellow squatted on the back has nothing to hold on to except the rope that is coiled and not fastened very securely owing to their method of roping the wild elephant when caught The one on the front does the roping of the foot as I have described previously As soon as this rope is on the elephant s foot the hout on the rear of the hunting elephant throws off the two coils of rope and as they are playing out the hout jumps down and fastens the end of the rope to a tree The hout who is still on the elephant s neck (the hunting elephant) turns his elephant around and drives up to the wild one trying to jam him against the tree with his tusks until the hout that is on the ground has the rope tied securely to the tree and remounts the hunting elephant s back. Then the rear hout handles the hunting elephant while the hout on the neck tries to get the big rope around the wild elephant's neck. If there are two or more hunting elephants around one of them comes to the help of the one that has made the catch and it is not hard to keep the wild one quiet until the rope is off his foot He is tied securely to the tree the rope is recoiled and they are off for another catch

When a hout is knocked off his elephant in the rush the remaining hout is more or less helpless and at the mercy of the wild ones unless he is riding a very good fighter Usually the hunting elephants are good fighters and as long as they have a hout on their backs they will do as told unless faced by a mad wild elephant

They are not keen on facing the mad ones if they can get away When we arrived at the top of the range there were about 255 or 30 wild ones up there including a few that had turned mad from the excitement of being chased The hunting elepbants can smell a mad elephant when quite a ways off Kruba Jun's (the chief hunter) stopped because he smelled a mad wild elephant but Kruba was so situated that he could not see what he was facing and as the bull refused to go forward he in turn threw the bull hook into him several times to force him through At the same time a mad wild bull tore through the brush at him—his elephant whirls into a fighting position and begins to give way because he was down hill We noticed this as soon as we got up in position to be in sight of the whole affair and Khum-Phra my mahout on Thom-Sen rushed in to help Kruba-Jun making all the noise we could by yelling and screaming to scare the mad wild bull off The rest of the wild elephants turned and ran away again but this mad one, instead of following his herd, turns towards the Seedaw elephant which was smaller than himself and with no tusks to defend himself with Seedaw turns and rushes away from the mad wild one, the hout on his neck throwing the bull hook into him all the time—but with no effect. With all this excitement he started going mad himself and the oil commenced to ooze In his mad rush through the jungle he knocked the rear hout off by overhanging brush and as soon as the Seedaw elephant realized there was but one hout he jams him against a tree and almost tears his leg off, then rushes through the jungle until the hout finally fell off We went after him and found him in the brush Thinking he was dead we picked him up and proceeded back to camp sending word for the other hunters to come back in but they were so badly separated by this time that they could not all be found We got into camp and fixed up the injured hout as best we could

Finally all but one elephant returned, coming in one at a time The last hout came in the next morning telling us some of the experiences of camping all night mounted upon an elephant's back with nothing to eat and no water After all this excitement we returned to Ma Konge village and sent out hunters to find and capture the Seedaw elephant—waited two days with no success so went out again

It made me sick to think with all that excitement I couldn't get a foot of film for of course they *would* have their fight in the thickest spot where no light could go through and you couldn t see ten feet ahead of you.

Finally we ran into a small herd and drove them out into open country and were able to land a few catching eight in all But the actual catching is not very exciting because first of all, the poor fellow has no chance once the rope is around his foot and he gets tied and chained to a tree—he simply 'stays put' until his spirit is so broken that he can be handled and started to be trained by a hout—usually the one that catches him

Of course when I saw the mad wild ones the first thing I thought of was to begin firing at him with the rifle but according to their religious ceremony they go through before going into the jungles they take the oath that they are not going into the jungles to hurt the wild elephants just to take them without any harm and regardless of how much they might be hurt themselves they stick to their oath

Converting 400 Foot Film Magazines To 1000 Foot Capacity

MAKING possible the salvaging of hundreds of 400 foot magazines that are now in the discard Ralph G Fear, head of the Cinema Equipment Company of Hollywood announces a new system of converting these discarded mags into modern 1000-foot magazines.

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Capturing Autumn's Tints

(Continued from Page 33)

jotned the rest of the industry in its Westward trek. there is no doubt that it would be with us today

Technicolor

About the time Prizma began its decline. a new face was pushed over the cinematic horizon A group of engineers from Boston had evolved a process which they called Technicolor and with which they proposed to brighten up the movies. When Technicolor took its first bow. it was a two-color twin-lens proposition. which gave fine results in tbe laboratory. but not in the studio This was soon abandoned for a subtractive process. which achieved considerable success The negative was made in a special camera which made the two color-images through a single lens at one exposure. by means of prisms The two sets of negative frames were then printed onto two separate films. which were appropriately dyed. and then cemented back-to-back. in perfect register This gave a very satisfactory print indeed and one which could be run in any theatre However. it had two slight drawbacks it was rather denser than the ordinary print requiring a more powerful projection-light, and as the film was thicker the focus of the projector bad to be altered between black and-white and color sequences Still. the process caught on commercially and became quite a success

Of late however. Technicolor has made a number of improvements which have placed it at the forefront of professional color processes The double film has been entirely done away with while production has been so simplified that the cost has been lowered very considerably and the volume tremendously increased In the new process, tbe actual taking is practically the same but the printing is entirely different Two separate prints are made. one of all the red images and one of the green ones These are so treated that the image is in relief in the gelatine itself Then they are inked just as printing type is, and brought in contact with a strip of clear film carrying only a gelatine coating The two images are printed onto this film one over the other. exactly as colored pictures are printed for a magazine This is known as *Imbibition printing*, and has long been a recognized method of producing still color-photographs but has not been successfully applied to movies before on account of the way the colors spread or diffuse on the film This causes a lack of sharpness. but the latest examples of Technicolor indicate that this has been almost completely overcome Incidentally, the process can easily be adapted to three-color work if need be, and there is reason to believe that it soon will be if it has not already been

This pretty well disposes of all the outstanding professional processes There are quite a number now in the experimental stage which will sooner or later make their bow to the public but with them we cannot concern ourselves now Undoubtedly some of them promise interesting developments in the line of practical color work but they will in due course be fully treated in other parts of this magazine In the meantime our interest lies primarily in the two existing processes which are designed particularly for amateur use So much has been written about them both that it is hardly necessary to fully describe them here. but no survey of the color-cinema field could be complete without touching them.

Vitacolor

"Vitacolor" the invention of Max DuPont A S C is a refined two color additive process of the Kinemacolor school However. Mr DuPont has evolved innumerable refinements throughout the whole process His taking filters are entirely original. and work on a principle involving the balancing of the various light frequencies during the exposure in a way quite impossible with single filters The results are beautiful. and amazingly free from the faults—such as fringing and eye-strain hitherto associated with such systems

Kodacolor

"Kodacolor" the Eastman Company's contribution to amateur color work is absolutely unique in the cinematographic field In effect it is a combination of a three-color additive system with the principle of the still photographer's screen-plate. such as the Autochrome or Paget In screen-plate systems the color screens are embodied in the plate itself, in the form of minute colored starch-grains or ruled lines These break the picture up into many tiny parts each taken through one of the tiny filters If the filters are small enough so as not to interfere with the vision of the picture itself. they make it a color picture This principle has been in use in still photography for many years (Lumiere's Autochrome process was patented in 1904), but it has for many reasons seemed impossible to adapt it to cinematography.

However in 1908 another Frenchman M Berthon patented a process which realized most of these advantages without undue difficulty in manufacture His idea was to place color filters in the lens and then to emboss on the film a series of small lenses which form images of these filters on the film (in all screen-processes the emulsion is at the far side of the support from the lens) giving practically the same result as the tiny filters of a screen-plate Then when the film has been developed and reversed (as is an Autochrome plate) projection with similar color-screens on the projection lens will give a color picture on the screen The lenses embossed on the film can be either cylindrical or spherical If they are spherical the filters must also be circular and the result on the film is like the tiny round color-units of an Autochrome while if the embossed lenses be cylindrical the lens-filters must be in the form of parallel strips and the result is like the microscopic color-rulings on the old Paget color-plates Berthon. Dr. Mees tells us. eventually became associated with an engraver named Keller Dorian. and continued the development of his process Finally they offered it to the Eastman Company. who seeing that it was in line with their own cine-Kodak experiments purchased it. and ultimately perfected it for amateur use

After a vast deal of experimentation the process reached the market under its now famous name of Kodacolor' In it. thousands of tiny lenses are impressed on the film by running it through steel rollers These lenses are cylindrical running the the entire length of the film. and are about four times narrower than the dots making up the average magazine illustration They subdivide the image into tiny parallel vertical strips corresponding to the three color strips of the taking filter The action of these strips in synthetizing the color of tbe screen image is perhaps best explained by again quoting Dr Mees. who says.

On the projection lens is a color filter of the same kind as that used on the camera lens and of the same primary colors—red green and blue When the picture is projected the opaque areas of the film prevent the light from coming through the corresponding filter on the lens and thus falling on the screen For each color therefore. the emulsion areas whose density is determined by the exposure given in the camera and the subsequent reversal processing regulate the amount of light transmitted through the red green and blue segments of the filter on the projecting lens and thus determine the color which is projected on the screen. so that on the screen we obtain a reproduction of the original colors of the scene photographed

The results given by this process are truly exquisite though it has too certain limitations In the first place the lens used must be of a definite speed focal length. and formula, in order to work with the smaller lenses already on the film Secondly. the emulsion used has to be so finely grained that the speed is necessarily reduced while the filters still further cut down the light making it operable under almost perfect light conditions The same is also true of the projection and thus the light-source has to be far stronger than otherwise the screen smaller. and more highly-reflective

However despite the admitted drawbacks of both of these processes their advantages are so far more numerous and the new fields they open up so boundless. that no true cine amateur can afford to pass them by True there will undoubtedly be great developments in the future bur tbe one who delays his plunge into color cinematography for that reason alone will certainly regret it. for though he may have more perfect processes then than he would now. he will also have the smarting memories of countless lost opportunities—the regrets of pleasures missed and joys that might have been had he been one of today s pioneers of amateur color-cinematography

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Russia

Kino-Sibir is credited with the intention of constructing a modern studio in Novosibirsk Siberia

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The first Russian made sound film is to be shown shortly on Russian reproducing apparatus Already the import of similar foreign equipment has been prohibited

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Production of sound films in Germany from July 1. 1928, to June 30. 1929 amounted to a total length of approximately 35 000 ft. composed of 75 films Most of this, however. composed of sound shorts of an average length of 600 ft

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South Africa

Public demonstrations of television are being given in South Africa by the Baird Television Development, Ltd., in conjunction with the African Broadcasting Company

Whiteman Picture a Revue

Paul Whiteman's long delayed and discussed picture for Universal is now slated to be made as a Revue ' according to latest advices from the Universal offices

The picture will carry the title of "The King of Jazz Revue," and production is scheduled to start in November. Hal Mohr A S C., is down for the position of Chief Cinematographer, or, as is now the style Director of Photography Mohr is doing all of the ' big ' pictures at Universal and judging from his work on "Broadway " will continne so for a long time to come.

Spain

Automatic reproduction of colors on a cinematographic screen was the object of a report submitted to the Royal Academy of Sciences in Madrid by Jose Antonio de Artigas, director of the Central School of Industrial Engineers He explained the theory of such reproduction according to the Keller-Dorian and Mess Systems and related his own researches in this connection during the past few years A scientific discussion followed, when de Artigas explained in detail the proceeding applied by him and proved by various experiences that the problem of automatically coloring any black and white film was definitely solved De Artigas' new process is claimed to be of considerable importance for the future of the Film Industry. (French Press)

Italy

The Italian semi-official institute "Luce," which is producing cultural and scientific films, has recently purchased a German scientific film showing the latest medical researches and experiments on Cancer and the treatment of this disease by X ray and radium.

A press report state that a sound-film was produced recently in a convent near Milan. The film has neither plot nor action of any sort, but is the reproduction of several religious ceremonies with singing and organ music It was produced by monks without the assistance of any film professionals and is not intended for public exhibition but it will be brought to the Vatican and shown to the Pope

Reflectors

(*Continued from Page* 31)

The blue glass holds back the colors that have little effect on the ordinary type of emulsion It enables the eye to view a scene exactly as the camera records it When the shadowside of a subject, or any shaded portion for that matter, appears black when viewed through a blue glass filter, reflectors should be used A little experimenting with a monochrome filter and a reflector will go a long way to help you improve the quality of your films The blue filter is designed to work with the ordinary type of film When panchromatic film is used it is necessary to use a special panchromatic monochrome filter.

A reflector is especially necessary when photogtaphing a close-up of a person wearing a hat or a person standing in a doorway Ordinarily such pictures show very little detail in the face A reflector will bring out this missing detail to a surprising degree The untrained eye may not detect this difference at a glance, but the camera certainly will When viewed through a monochrome filter it will show up plainly The soft or medium reflector should be used for this purpose. The light from a hard reflector should rarely be thrown on the face (unless a spot-light effect is wanted) as the glare will cause the subject to squint.

Pleasing effects can be secured by back lighting a subject The hard type reflector is ideal for back lighting It should be placed at any angle to one side of and back of the subject Be sure that it is far enough to one side so that no rays are reflected directly into the camera Back lighting the head of a subject will give a beautiful effect and cause it to stand out in relief. A mirror may also be used for back lighting It is particularly effective when directed on the hair. By moving a mirror very slightly when the camera is in operation a shimmering effect may be obtained A mirror must be used with great care lest a streak of light from it fall on the lens and fog the film The accompanying sketch shows the proper position for the reflector in both front lighting and back lighting The direct rays of light are shown as solid lines while the reflected light is indicated by dotted lines.

As reflectors add light to the subject, it will not be necessary to give the film quite as much exposure The exact effect of this can be obtained only by a little experimenting and testing Remember that if you are using reversible film it is better to underexpose a bit rather than overexpose Be careful that your reflectors are out of the range of the camera at all times Check up on this every time the camera is moved The spectator should not be conscious of the fact that reflectors have been used when he views the finished film He will marvel at the detail visible in the shadows without knowing how the effect was secured

The only way to find out just how much reflectors will help your pictures is to try them They are easy to make and easy to use Make two or three and try them out. Perhaps you will be surprised at the improvement they make in your films!

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Makeup

(*Continued from Page* 37)

shadow She should deepen her lashes in color with masque and accentuate her eyebrows with brown eyebrow pencil

Bebe Daniels is the *Pale* Brunette for the reason that her creamy skin is contrasting to very dark hair and eyes. The Bebe Daniels type should use powder in the Rachelle shade rouge, the color which is popularly known as Raspberry and a lip stick of a medium tone red

Estelle Taylor typifies the *Dark Brunette*, having an olive skin, with dark hair and brown or black eyes To blend with her skin she should use olive powder; rouge, raspberry, and she should choose a lipstick of a deeper color than Bebe Daniels—really a dark lipstick.

Still another type of *Brunette* exists which might best be described as *Sport Loving*. Sue Carroll personifies this girl She has brown eyes, brown hair and light olive skin with a touch of color. She should use the brunette make-up in powder and lipstick This powder is called *Brunette* Lipstick should be of medium red However, she should use Raspberry rouge.

Redheads should be very careful to avoid offcolor in rouge and lipstick to avoid the makeup fighting with her hair. She should make a special study of effects both in the glare of sunlight and under artificial light as well Most are endowed with a creamy skin but others less fortunate freckle easily The girl with deep auburn hair and fair skin such as Janet Gaynor should use a rouge known to screen stars as "Day" which is perfect in harmony tones for this type Her powder is Rachelle and her lipstick light

Manila

Two Manila theatres are having a race to see which will be the first to get their sound picture equipment in operation Representatives of a third theatre are now in the United States purchasing sound equipment.

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